Assembly and operating instructions

Solenoid-coupled centrifugal pump vonTaine® 1010 PP and PVDF

EN

von Taine® 1010 PP

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von Taine® 1010 PVDF

A2924

Typ:

☐ PP/FKM ☐ PVDF/FKM

☐ PP/EPDM ☐ PVDF/EPDM

Insert type and serial no. here: _____

Please carefully read these operating instructions before use. · Do not discard.
The operator shall be liable for any damage caused by installation or operating errors.
The latest version of the operating instructions are available on our homepage.

General non-discriminatory approach

In order to make it easier to read, this document uses the male form in grammatical structures but with an implied neutral sense. The document is always aimed equally at women, men and gender-neutral persons. We kindly ask readers for their understanding in this simplification of the text.

Supplementary information

→ Please read the supplementary information in its entirety.

Information

This provides important information relating to the correct operation of the unit or is intended to make your work easier.

Warning information

Warning information includes detailed descriptions of the hazardous situation, see ↬ *Chapter 2.1 'Labelling of Warning Information' on page 7*.

The following symbols are used to highlight instructions, links, lists, results and other elements in this document:

Tab. 1: More symbols

Symbol	Description
1. →	Action, step by step.
⇨	Outcome of an action.
↬	Links to elements or sections of these instructions or other applicable documents.
■	List without set order.
[Button]	Display element (e.g. indicators). Operating element (e.g. button, switch).
'Display/GUI'	Screen elements (e.g. buttons, assignment of function keys).
`CODE`	Presentation of software elements and/or texts.

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1 General

Target group

Target group: commercial use.

These assembly and operating instructions contain basic information which must be observed for the installation, operation and maintenance of the pump. Therefore, it is essential that you read these assembly and operating instructions before assembly and “start up” of the pump. Ensure that these assembly and operating instructions are permanently available at the location where the pump is operated.

Main units

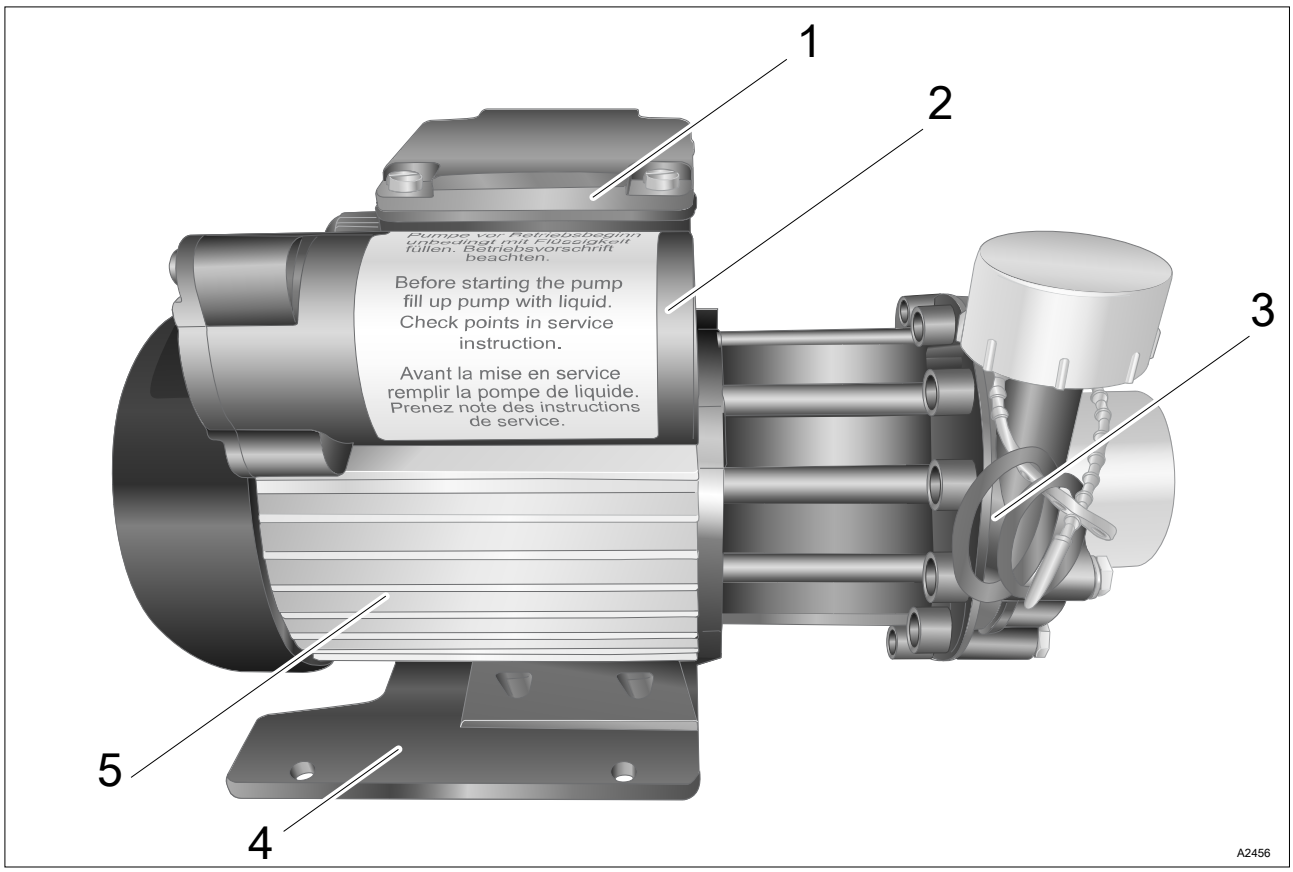

Fig. 1: Basic diagram: Main units of the vonTaine® pump

1 Terminal box
2 Electrical capacitor
3 Pump housing with pump head
4 Mounting foot
5 Drive housing with drive motor

Intended use

vonTaine® pumps are solenoid-coupled centrifugal pumps. Thanks to the solenoid coupling, the pump transports the liquid medium leak-free from a storage tank to another storage tank, or even directly into a discharge line.

The plastic pump is installed outside of the medium and/or storage tank and is integrated by means of a tube/pipe into the overall system.

The benefits for you

- Safe, reliable and leak-free pumping of liquid chemicals.
- Contactless coupling between the motor and impeller via a solenoid coupling.

Technical details

The individual components of the pump are available in different material versions. Refer to the pump nameplate or delivery note for the material version of your pump.

- Pump head, PP or PVDF.
- Seal, FKM or EPDM.
- The pump is not self-priming and requires a feed.
- The hydraulic connectors have pipe threads in accordance with DIN ISO 228-1.

1.1 Part numbers and operating parameters

Part no.	1023091	1023097	1028553	1028569
Pump type:	vonTaine® 1010 PP/FKM	vonTaine® 1010 PVDF/FKM	vonTaine® 1010 PP/EPDM	vonTaine® 1010 PVDF/EPDM
Max. pump capacity:	1800 l/h			
Operating range:	30 ... 1800 l/h			
Max. delivery height:	4.5 mWs			
Maximum system pressure at 20°C:	1.0 bar	2.0 bar	1.0 bar	2.0 bar

1.2 Construction

Pump housing, impeller, impeller magnet and housing canister are made of plastic. The centring shafts and bearing are made of oxide ceramic. The housing canister hermetically isolates the feed chemical from the outside atmosphere. Magnetic force transmission makes the need for a shaft seal redundant, therefore there is no possibility of a leakage at the shaft.

The housing components are statically sealed by O-rings.

The pump impeller is a radial impeller.

1.3 Nameplate

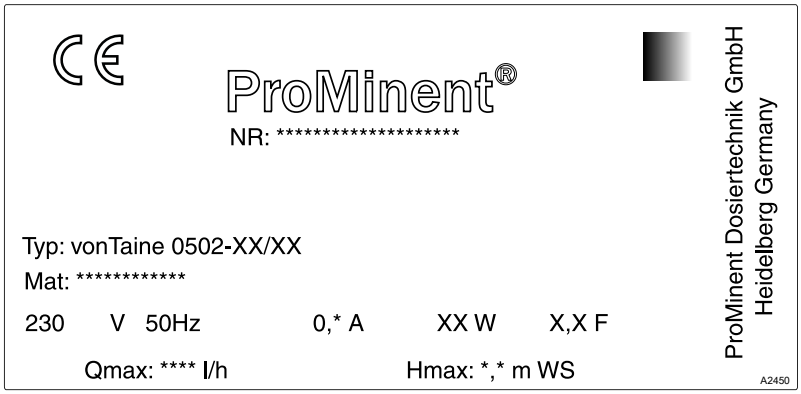

Fig. 2: Nameplate

The nameplate provides information on:

- CE mark,
- Manufacturer,
- Serial number *[NO.:]*,
- Place and country of origin,
- Type of pump with material version,
- Material number *[Mat:]*,
- Mains voltage in Volts,
- Mains frequency in Hertz,
- Current strength in Amps,
- Output in Watts,
- Capacitor capacity in Farad *[F]*,
- Maximum feed rate in l/h *[Qmax]*,
- Maximum delivery height in mWs *[Hmax]*.

1.4 Materials

Unit	XXXX PP	XXXX PVDF
Pump housing	PP	PVDF
Impeller	PP	PVDF
Impeller solenoid surround	PP	PVDF
Housing canister	PP	PVDF
Centring shaft	Oxide ceramic	Oxide ceramic
Slide bearing	Oxide ceramic	Oxide ceramic
Static seals	FKM or EPDM	FKM or EPDM

2 Safety

Always observe the labels and signs on the pump, e.g.:

- Rotational direction arrow.
- Specification for fluid connectors.
- Warning label to protect the pump from running dry.
- Nameplate.

and maintain them in a fully legible condition.

2.1 Labelling of Warning Information

Introduction

These operating instructions provide information on the technical data and functions of the product. These operating instructions provide detailed warning information and are provided as clear step-by-step instructions.

The warning information and notes are categorised according to the following scheme. A number of different symbols are used to denote different situations. The symbols shown here serve only as examples.

DANGER!

Nature and source of the danger

Consequence: Fatal or very serious injuries.

Measure to be taken to avoid this danger.

Description of hazard

– Denotes an immediate threatening danger. If the situation is disregarded, it will result in fatal or very serious injuries.

WARNING!

Nature and source of the danger

Possible consequence: Fatal or very serious injuries.

Measure to be taken to avoid this danger.

– Denotes a possibly hazardous situation. If the situation is disregarded, it could result in fatal or very serious injuries.

CAUTION!

Nature and source of the danger

Possible consequence: Slight or minor injuries. Material damage.

Measure to be taken to avoid this danger.

– Denotes a possibly hazardous situation. If the situation is disregarded, it could result in slight or minor injuries. May also be used as a warning about material damage.

NOTICE!

Nature and source of the danger

Damage to the product or its surroundings.

Measure to be taken to avoid this danger.

– Denotes a possibly damaging situation. If the situation is disregarded, the product or an object in its vicinity could be damaged.

Type of information

Hints on use and additional information.

Source of the information. Additional measures.

– *Denotes hints on use and other useful information. It does not indicate a hazardous or damaging situation.*

2.2 User qualification

WARNING!

Danger of injury with inadequately qualified personnel

The operator of the system / equipment is responsible for ensuring that the qualifications are fulfilled.

If inadequately qualified personnel work on the unit or loiter in the hazard zone of the unit, this could result in dangers that could cause serious injuries and material damage.

- All work on the unit should therefore only be conducted by qualified personnel.
- Unqualified personnel should be kept away from the hazard zone.

The pertinent accident prevention regulations, as well as all other generally acknowledged safety regulations, must be adhered to.

Training	Definition
Instructed personnel	An instructed person is deemed to be a person who has been instructed and, if required, trained in the tasks assigned to him and possible dangers that could result from improper behaviour, as well as having been instructed in the required protective equipment and protective measures.
Trained user	A trained user is a person who fulfils the requirements made of an instructed person and who has also received additional training specific to the system from the manufacturer or another authorised distribution partner.
Trained, qualified personnel	A trained, qualified employee is deemed to be a person who is able to assess the tasks assigned to him and recognize possible hazards based on his training, knowledge and experience, as well as knowledge of pertinent regulations. A trained, qualified employee must be able to perform the tasks assigned to him independently with the assistance of drawing documentation and parts lists. The assessment of a person's technical training can also be based on several years of work in the relevant field.
Electrical technician	An electrical technician is able to complete work on electrical systems and recognise and avoid possible dangers independently based on his technical training and experience as well as knowledge of pertinent standards and regulations. An electrical technician must be able to perform the tasks assigned to him independently with the assistance of drawing documentation, parts lists, terminal and circuit diagrams. The electrical technician must be specifically trained for the working environment in which the electrical technician is employed and be conversant with the relevant standards and regulations.
Service	The Service department refers to service technicians, who have received proven training and have been authorised by the manufacturer to work on the system.

2.3 Safety Information for Maintenance, Inspection and Installation Work

It is the responsibility of the operator to ensure that all maintenance, inspection and installation work is undertaken by authorised and qualified specialist personnel.

It is the responsibility of the operator to ensure that all qualified personnel is sufficiently informed by reading the assembly and operating instructions.

Only perform all work on the pump when the pump is at a standstill. Always observe the procedure for bringing the pump to a standstill, as described in the operating instructions.

The pumps or pump units, which pump feed chemicals harmful to health, must be decontaminated – refer in this regard to the material safety data sheet for the feed chemical.

All safety and protective equipment must be refitted and made operational immediately after conclusion of the work.

Fig. 3: No access to people with pacemakers or implanted defibrillators.

WARNING!

Warning of a strong magnetic field

The pump contains very strong magnets.

– When working on the pump, pay particular attention to the danger from magnetic fields. These magnetic fields can, for example, affect pacemakers.

People affected by this must stay away from the pump. The operator of the pump must ensure that suitable measures are put in place to avoid this danger.

2.4 Intended use

- Pumping of liquids similar to the viscosity of water.
- Pumping of acids, lyes etc.
- Pumping of gaseous liquids.
- All other uses or modifications are prohibited.

Use a quick-closing valve in the pipework, as pressure surges can irreparably damage the pump housing.

→ Pay particular attention when pumping crystallising feed chemicals that the feed chemical does not crystallise in the pump. Use a suitable agent to immediately flush through all wetted parts after decommissioning. Refer to the material safety data sheet for the feed chemical.

Resistance list

Pay attention to the resistance of the pump materials refer to the ProMinent Resistance List at www.prominent.com.

2.5 Sound Pressure Level

Sound pressure level

Sound pressure level LpA < 70 dB according to EN ISO 20361

At maximum feed rate and maximum back pressure (water).

3 Storage and transport

- **User qualification:** instructed user ↳ *Chapter 2.2 'User qualification' on page 9*

Environmental conditions for storage and transport:

- Permissible ambient temperature: +1 °C ... +40 °C.
- Humidity: maximum 90% relative air humidity, non-condensing.
- Other: No dust, no direct sunlight.

3.1 Transport

Only transport the sensor in its original packaging and in compliance with the permissible environmental conditions. No further special conditions have to be observed in relation to transport.

3.2 Disposal of Packaging

Packaging material

Dispose of packaging material in an environmentally responsible way. All packaging components carry the corresponding recycling code ♻.

4 Arrangement/Installation

- **User qualification, mechanical installation:** trained and qualified personnel, see *Chapter 2.2 'User qualification' on page 9*
- **User qualification, hydraulic installation:** trained and qualified personnel, see *Chapter 2.2 'User qualification' on page 9*
- **User qualification, electrical installation:** electrical technician, see *Chapter 2.2 'User qualification' on page 9*

Select the installation location so that the pump is easily accessible.

Adhere to the following ambient conditions:

- Ambient temperature -10 ... +40°C *
- Air humidity, max. 95% relative humidity, non-condensing

* In doing so, note the freezing point of the liquid to be pumped. Do not allow the liquid to freeze in the pump.

WARNING!
Danger from hazardous substances!
Possible consequence: Fatal or very serious injuries.

Please ensure when handling hazardous substances that you have read the latest safety data sheets provided by the manufacture of the hazardous substance. The actions required are described in the safety data sheet. Check the safety data sheet regularly and replace, if necessary, as the hazard potential of a substance can be re-evaluated at any time based on new findings.

The system operator is responsible for ensuring that these safety data sheets are available and that they are kept up to date, as well as for producing an associated hazard assessment for the workstations affected.

4.1 Assembly

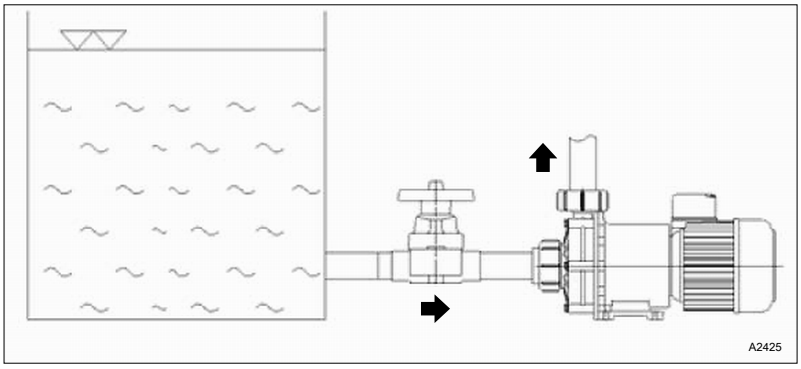

Fig. 4: Installation example

1. Assemble the pump horizontally or vertically, making sure that the motor points upwards.
2. The pump is not self-priming and needs a feed. Assemble the pump so that the medium to be pumped flows automatically to the pump, see .

3. Fix the pump onto a sufficiently load-bearing base surface. Provide the fittings on site.

4.2 Hose Lines / Pipework

CAUTION!
Pressure surges can destroy the pump housing.

Never use quick-closing valves in the pipework.

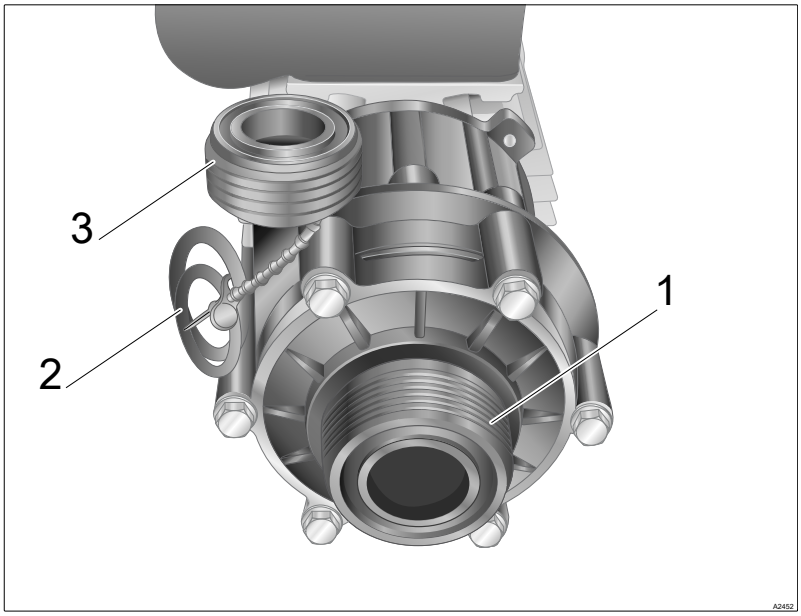

Fig. 5: Pump suction and pressure nozzles

1 Suction nozzle
2 Sealing rings provided
3 Pressure nozzle

1. Use pipework widths to match the pump's suction and pressure nozzles.

Weight of the lines
The weight of the lines may not exert a load on the pump housing.

2. Lead the suction and discharge lines without tension to the pump housing.

It is the duty of the operator of the pump to ensure that the connections to the suction and pressure nozzles are properly established.

4.2.1 Suction Line

- Use pipe or hose material as the suction line, which cannot deform from the negative pressure that occurs, not even at high temperatures.
- You have to keep the suction line as short as possible and fit it so that no gases can accumulate. Always route the suction line falling towards the pump.

- When designing pipes, fittings etc., make sure that the flow resistance is as minimal as possible.
- Make sure that the flow velocity does not exceed 1 m/s in the suction line.

4.2.2 Discharge Line

- Make sure that the guide value for the flow velocity in the discharge line is 3 m/s.
- You have to install a choke valve into the discharge line to regulate the delivery flow.

4.3 Electrical connection

- Protect the motor with a motor protection switch.
- Switch off the supply voltage a minimum of 5 minutes before opening the terminal box.
- Check whether the data on the nameplate matches the available power supply.
- Make sure that an electrician technician wires the electrical connectors and provides the additional protection in accordance with the regional regulations and standards.

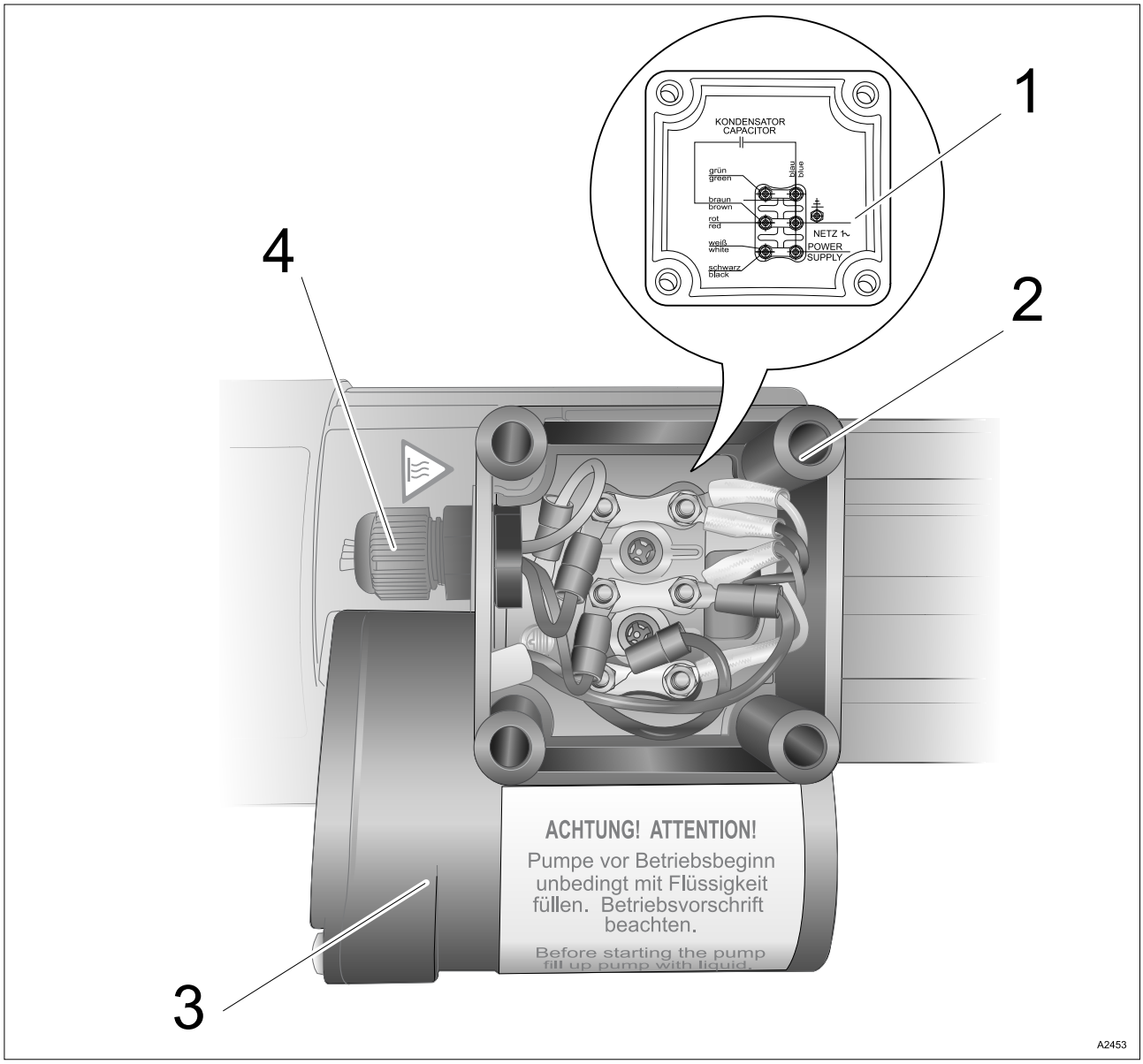

Fig. 6: Cover of the terminal box with connection diagram

1 Cover of the terminal box with connection diagram
2 Terminal box
3 Electrical capacitor
4 Cable opening with cable dummy

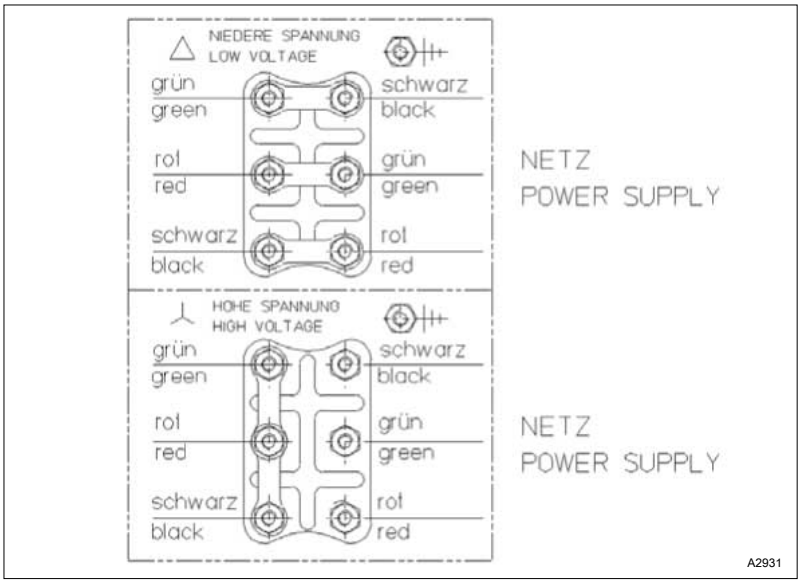

Fig. 7: Wire the 3-phase AC motors in accordance with the following diagram:

1. Connect the 3-phase AC motor, as shown on the diagram in Fig. 7.

NOTICE!

Damage is possible to the pump

Pump running dry. Only check the direction of rotation with liquid in the pump.

2. Pay attention to the directional arrows on the pump, see

   Check the direction of rotation after installation.

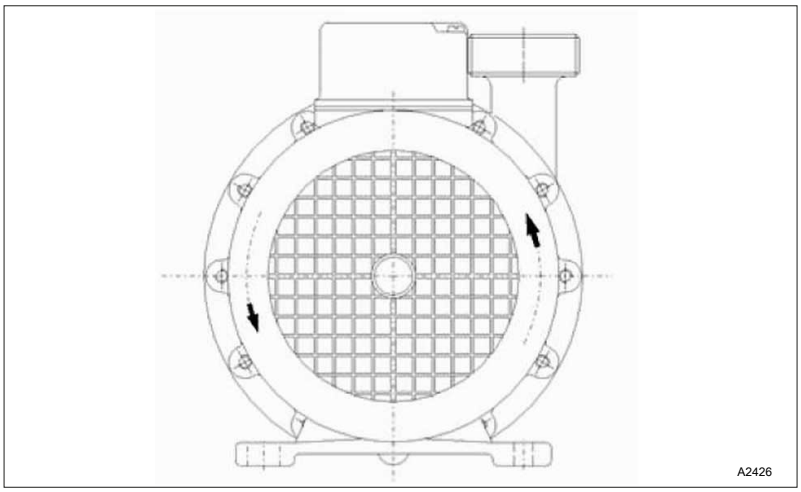

Fig. 8: Directional arrows = rotational direction of the motor

5 Start Up/Decommissioning

- **User qualification:** trained user, see *Chapter 2.2 'User qualification' on page 9*

WARNING!

Danger from hazardous substances!

Possible consequence: Fatal or very serious injuries.

Please ensure when handling hazardous substances that you have read the latest safety data sheets provided by the manufacture of the hazardous substance. The actions required are described in the safety data sheet. Check the safety data sheet regularly and replace, if necessary, as the hazard potential of a substance can be re-evaluated at any time based on new findings.

The system operator is responsible for ensuring that these safety data sheets are available and that they are kept up to date, as well as for producing an associated hazard assessment for the workstations affected.

NOTICE!

Sealed discharge line

The pump must not operate against the sealed discharge line.

The medium in the pump can heat up. The pump is damaged by this.

As the operator, take appropriate measures and processes to ensure that the pump does not work against a sealed discharge line.

5.1 Preparations for Operation

CAUTION!

Damage is possible to the pump

Do not allow the pump to run dry.

We recommend that low flow contact devices in the form of flow monitors, contact manometers, differential pressure switches or level controls, are installed.

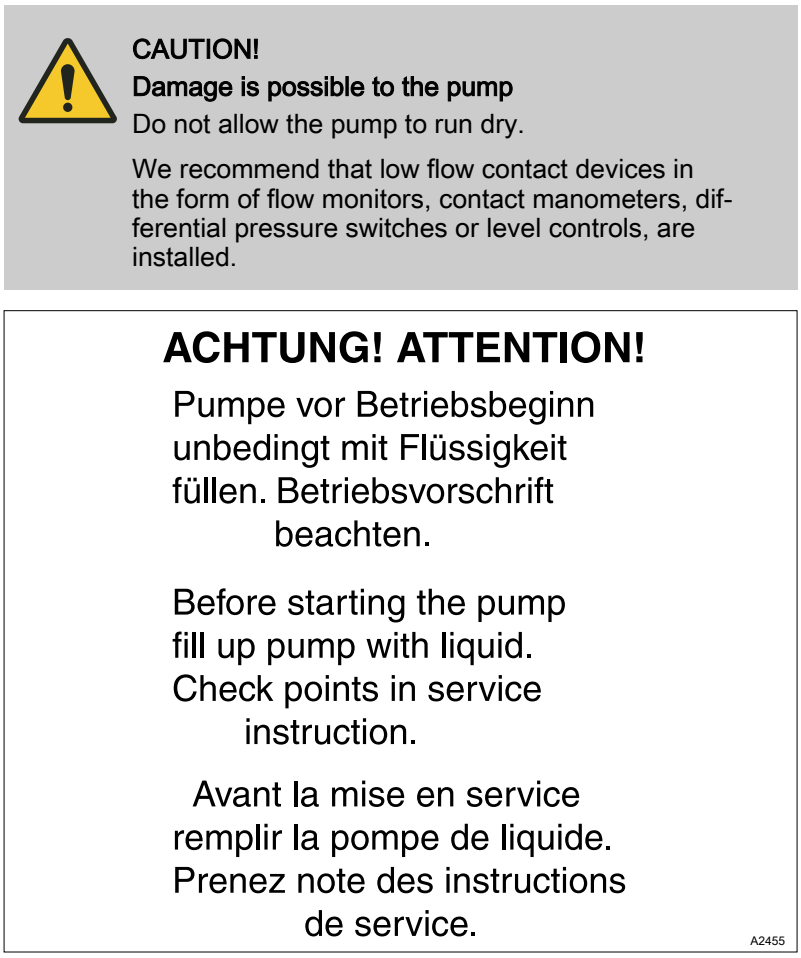

Fig. 9: Label on the pump: "It is essential that the pump is filled with liquid before the start of operation. Note the operating regulations."

1. Use a suitable liquid to fill the pump housing and the suction line, noting the material safety data sheet for the feed chemical.
2. Check that all connector threads are tight.
3. Open all suction-side shut-off valves.

5.2 Start Up

NOTICE!

Contamination/metal particles

Protect the pump from coarse dirt and magnetisable metal particles in the feed chemical.

As the operator, put in place appropriate measures and processes to ensure that no dirt/metal particles enter the pump.

1. Switch on the motor.
2. Immediately check the direction of rotation of the motor by switching it on and off as follows.
   ⇨ The direction of rotation must match the directional arrow.

3. Control the operating point by slowly opening the discharge-side choke valve.

   If no choke valve is installed on the discharge side, then the operating point will set itself automatically in accordance with the characteristic line for the system.

5.3 Operation

Proceed as follows if the motor protection switch switches off the motor:

1. Before switching on again, check whether the pump impeller is rotating smoothly.
2. Check whether the suction line and the pump housing are filled with medium.
3. Switch on the motor again.

If the pump pumps briefly and then the delivery flow stops, then the solenoid coupling is overloaded and uncoupled. Proceed as described in *Chapter 7 'Faults, Possible Causes, Rectification' on page 26*.

5.4 Decommissioning

1. Switch off the motor.
2. Close the shut-off valves.
3. If the medium remains in the system, then secure the fittings from being opened accidentally.

6 Maintenance/Servicing

- **User qualification, mechanical work:** trained and qualified personnel, see *Chapter 2.2 'User qualification' on page 9*
- **User qualification, hydraulic work:** trained qualified personnel, see *Chapter 2.2 'User qualification' on page 9*
- **User qualification, electrical work:** electrical technician, see *Chapter 2.2 'User qualification' on page 9*

WARNING!

Danger from hazardous substances!

Possible consequence: Fatal or very serious injuries.

Please ensure when handling hazardous substances that you have read the latest safety data sheets provided by the manufacture of the hazardous substance. The actions required are described in the safety data sheet. Check the safety data sheet regularly and replace, if necessary, as the hazard potential of a substance can be re-evaluated at any time based on new findings.

The system operator is responsible for ensuring that these safety data sheets are available and that they are kept up to date, as well as for producing an associated hazard assessment for the workstations affected.

6.1 Preventative maintenance

WARNING!

Risk of injury from magnetic forces

There is a risk of injury from magnetic forces when assembling or dismantling the pump head.

As the operator, put in place appropriate measures and processes to ensure that no one can be injured or endangered by the magnetic field.

Make sure when assembling or dismantling the pump that there are no magnetisable metal particles at the workplace. These metal particles will remain stuck to the pump and can damage parts of the pump.

As the operator, put in place appropriate measures and processes to ensure that there are no magnetisable metal particles at the workplace.

1. Clean the fan cowling to prevent the motor from overheating.
   ⇨ Interval: at least once per month.

2. Slide bearing, centring shaft and thrust rings are designed for continuous operation, but should be checked for deposits at regular intervals.

   ⇨ Interval: once a year.

   In the event of dirt, sludge-like and crystallising media, check the pump at shorter intervals if required and clean when necessary.

3. Check the status of the static seals at regular intervals and replace the components if required.

6.2 Dismantling the pump head

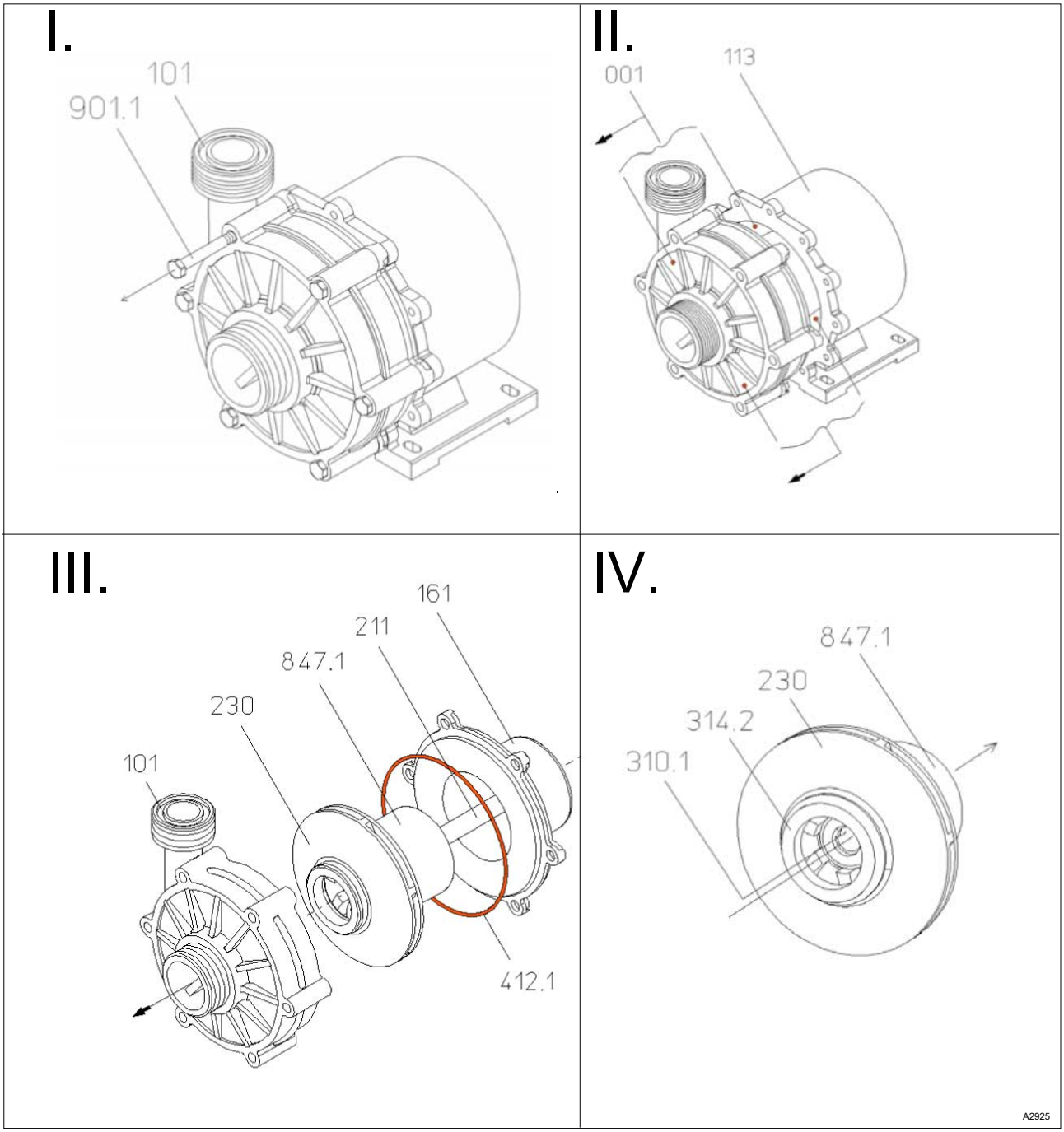

Fig. 10: Dismantling the pump head

1. Loosen the 6 screws (901.1) on the pump housing (101).

   Tool: jaw spanner/box wrench AF10.

2. Carefully pull the pump head assembly (001) from the housing (113).

   Tool: lever.

3. Remove the pump housing (101) from the centring shaft (211). Remove the impeller magnet (847.1) with the impeller (230) out of the housing split case (161).

4. Press the slide bearing (310) backwards out of the impeller magnet (847.1).

   Tool: manual toggle press + Ø 20 mm pin.

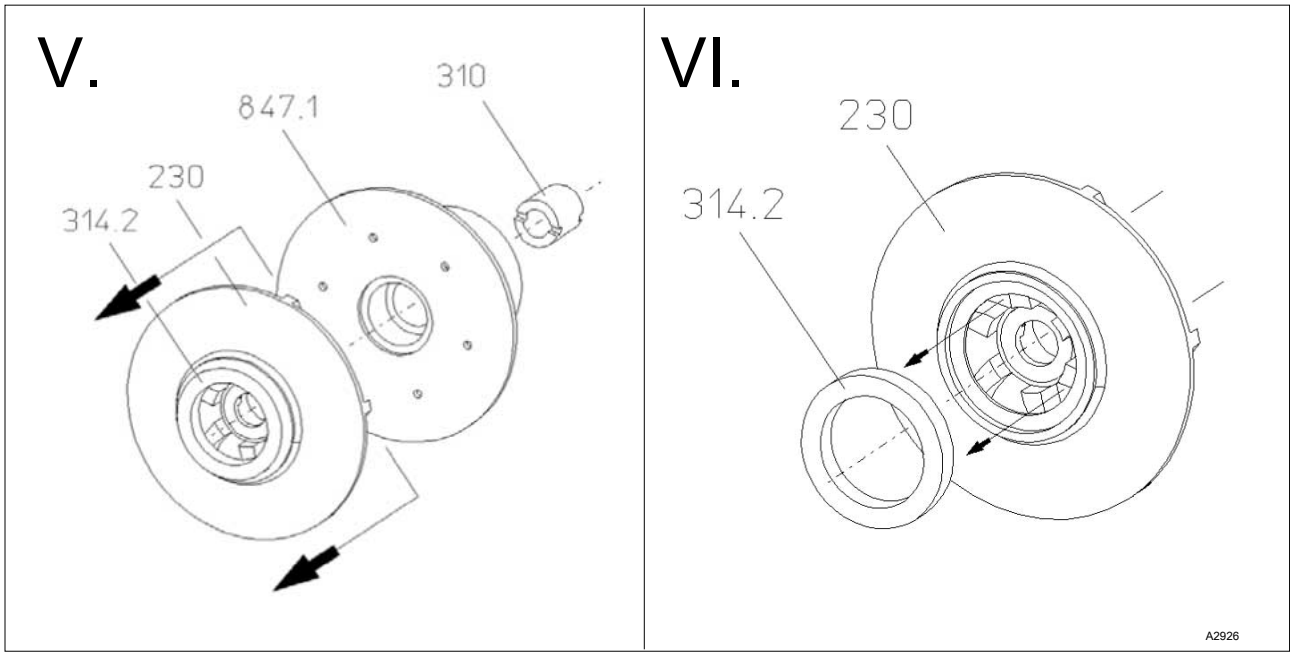

Fig. 11: Dismantling the pump head

5. Loosen the impeller (230) from the impeller magnet (847.1).

   Tool: lever.

6. Loosen the thrust ring (314.2) from the impeller (230).

   Tool: section of pipe with an internal Ø of 80 mm. Punch Ø 6 mm.

6.3 Assembling the pump head

Moving the impeller magnet.

After assembling the pump head, the impeller with the magnet (847.1) should still move axially on the centring shaft (211).

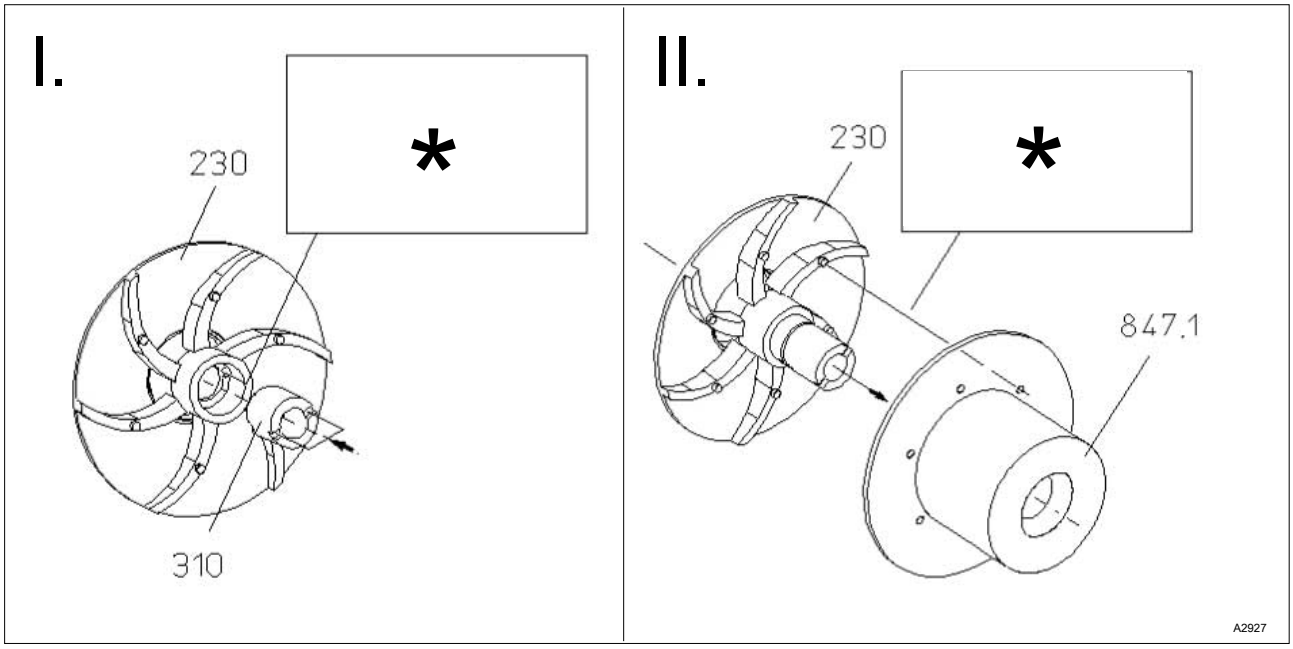

Fig. 12: Assembling the pump head

1. Fit the slide bearing (310). * pay attention to the anti-turn locking device.

   Tool: manual toggle press.

2. Press the impeller (230) onto the impeller magnet (847.1). * pay attention to the anti-turn locking device.

   Tool: manual toggle press + plastic thrust washer Ø 80 mm.

7 Faults, Possible Causes, Rectification

- **User qualification:** trained user, see *Chapter 2.2 'User qualification' on page 9*

Fault description	Cause	Remedy
The pump does not run once it has been switched on.	No mains voltage.	Check the mains voltage.
	Foreign body in the pump housing.	Remove the foreign body.
Uncouple the solenoid coupling.	The specific weight and/or the viscosity of the feed chemical are too high.	Check the pump capacity and//or other viscosity of the feed chemical.
	The pump was switched off and restarted before the rotor came to a standstill.	The rotor must come to a standstill before you restart.
The motor is becoming too hot.	Fan and fan cowling are dirty.	Clean the fan and fan cowling.
The pump is running but not pumping.	Air in the lines.	Bleed/vent.
The pump is making loud flowing noises.	Cavitation.	■ Increase the suction line. ■ Throttle on the suction side. ■ Lower the temperature of the liquid.
The pump is now drawing in by suction.	No liquid in the pump.	Open the slider.
Feed rate too low.	The choke valve is not fully open.	Fully open the choke valve.
	Air in the system.	Bleed/vent.
	The cross-section of the suction and discharge line is too small (high losses).	Increase the cross-section of the suction and discharge line.
Feed rate too high.	The losses from the system are less than assumed.	Install a choke fitting into the discharge line.

8 Use Parts Disposal/Declaration of Decontamination

- **User qualification:** instructed user, see *Chapter 2.2 'User qualification' on page 9*

WARNING!

Danger from hazardous substances!

Possible consequence: Fatal or very serious injuries.

Please ensure when handling hazardous substances that you have read the latest safety data sheets provided by the manufacture of the hazardous substance. The actions required are described in the safety data sheet. Check the safety data sheet regularly and replace, if necessary, as the hazard potential of a substance can be re-evaluated at any time based on new findings.

The system operator is responsible for ensuring that these safety data sheets are available and that they are kept up to date, as well as for producing an associated hazard assessment for the workstations affected.

NOTICE!

The used part can only be accepted with a completed Declaration of Decontamination

Printed copy also available as a download at: www.prominent.com

A completed and signed "Declaration of Decontamination" is required by law and in order to protect our staff, before your order can be processed.

Ensure that the Declaration of Decontamination is attached to the outside of the package. Otherwise we are unable to accept your delivery.

NOTICE!

Regulations governing the disposal of used parts

– Note the national regulations and legal standards that currently apply in your country when disposing of the product.

ProMinent GmbH, Heidelberg/Germany will take back clean used parts.

9 Technical data

Part no.	1023091	1023097	1028553	1028569
Pump type	1010 PP/FKM	1010 PVDF/FKM	1010 PP/EPDM	1010 PVDF/EPDM
Hydraulic data				
Max. pump capacity	9600 l/h	9600 l/h	9600 l/h	9600 l/h
Operating range	60 ... 9600 l/h	60 ... 9600 l/h	60 ... 9600 l/h	60 ... 9600 l/h
Max. delivery height	10.0 mWs	10.0 mWs	10.0 mWs	10.0 mWs
Maximum system pressure at 20 °C	2.5 bar	3.5 bar	2.5 bar	3.5 bar
Electrical data				
Motor capacity	370 W	370 W	370 W	370 W
Voltage 50 Hz (V)	230/400	230/400	230/400	230/400
Current 50 Hz (A)	1.76 / 1.02	1.76 / 1.02	1.76 / 1.02	1.76 / 1.02
Speed 50 Hz (rpm)	2834	2834	2834	2834
cos φ	0.755	0.755	0.755	0.755
Degree of protection	IP 55	IP 55	IP 55	IP 55
Insulation class	F	F	F	F
Additional data				
Max. temperature of the medium	80 °C	95 °C	80 °C	95 °C
Maximum viscosity	<20 mPas	<20 mPas	<20 mPas	<20 mPas
Max. ambient temperature	40 °C	40 °C	40 °C	40 °C
Max. density of the medium	1.6 ... 2.0 kg/dm³	1.6 ... 2.0 kg/dm³	1.6 ... 2.0 kg/dm³	1.6 ... 2.0 kg/dm³
Suction connector	G 2	G 2	G 2	G 2
Pressure connector	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2
Pump housing	PP	PVDF	PP	PVDF
Impeller	PP	PVDF	PP	PVDF
Colour of liquid end	black	white	black	white
Slide bearing	Oxide ceramic	Oxide ceramic	Oxide ceramic	Oxide ceramic
Centring shaft	Oxide ceramic	Oxide ceramic	Oxide ceramic	Oxide ceramic
Impeller thrust ring	Teflon graphite	Teflon graphite	Teflon graphite	Teflon graphite
Housing thrust ring	Oxide ceramic	Oxide ceramic	Oxide ceramic	Oxide ceramic
Seal material	FKM	FKM	EPDM	EPDM
Motor colour	RAL 2003	RAL 2003	RAL 2003	RAL 2003
Weight	9.0 kg	9.5 kg	9.0 kg	9.5 kg
Dimensions LxDxH [mm]	346 x 163 x 186	346 x 163 x 186	346 x 163 x 186	346 x 163 x 186

10 Spare parts

Ordering address for spare parts and accessories: The current address for ordering spare parts and accessories can be found on the manufacturer's homepage www.prominent.com.

10.1 Exploded view drawing

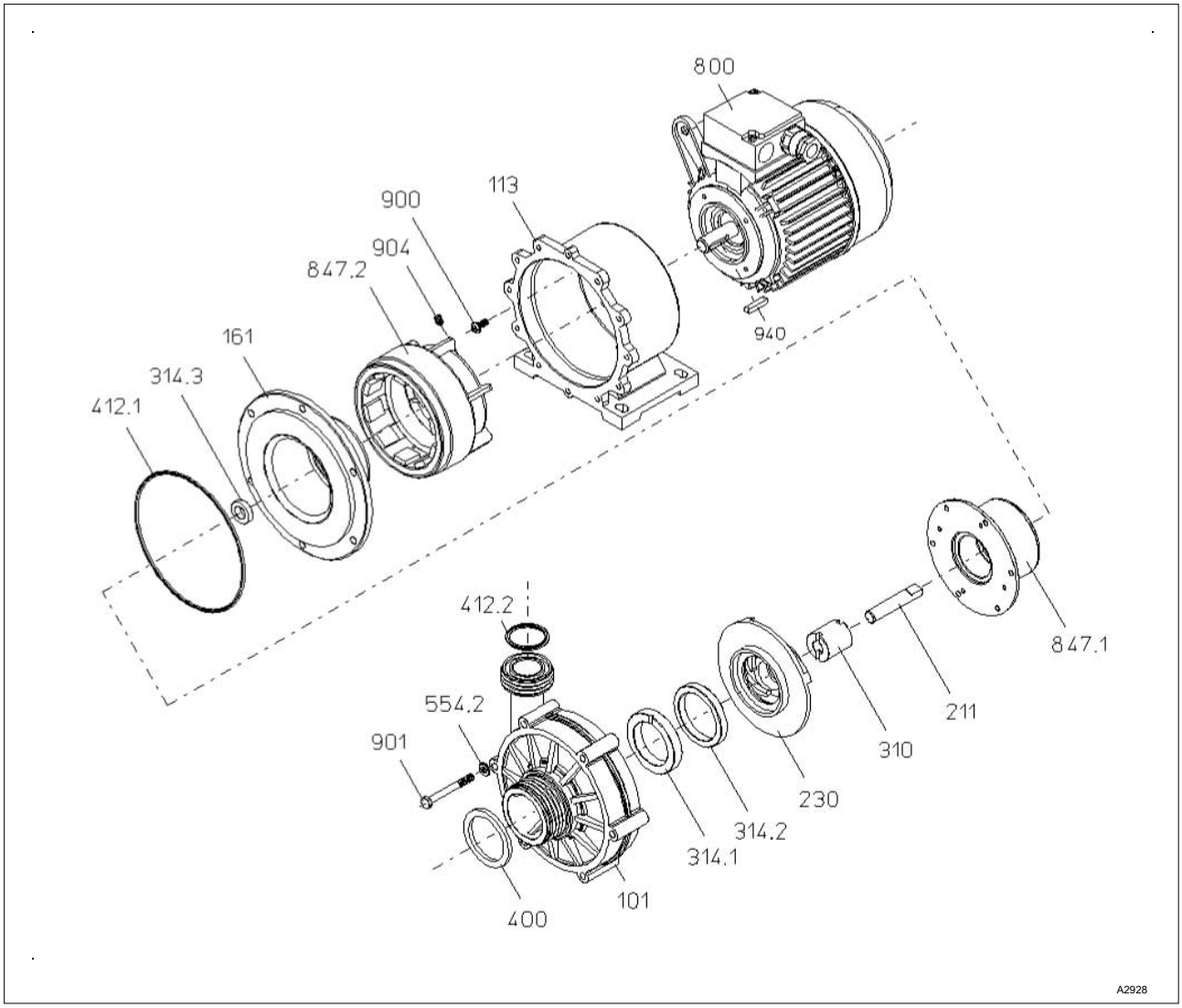

Fig. 13: Exploded view drawing

10.2 Parts list for vonTaine® 1010 PP/FPM

Pos.	Qty.	Part no.	Designation	Material
101	1	PUMA.14.0180.020	Pump housing without thrust ring	Polypropylene
113	1	PUMA.00.0370.020	Housing, 30 mm	Aluminium
161 + 314.3	1	PUMA.12.0150.086	Housing canister, 30 mm, with oxide ceramic thrust ring	Polypropylene
211	1	PUMA.12.0150.135	Centring shaft, 30 mm	Oxide ceramic
230	1	PUMA.14.0180.033	Impeller, Ø 90/5.7 mm	Polypropylene

Pos.	Qty.	Part no.	Designation	Material
310	1	PUMA.12.0150.126	Slide bearing	Oxide ceramic
314.1	1	PUMA.12.0150.045	Thrust ring, housing	Oxide ceramic
314.2	1	PUMA.12.0150.055	Thrust ring, impeller	Teflon graphite
400	1	PUMA.12.0150.039	Flat seal, suction side	FPM
412.1	1	PUMA.12.0150.001	O-ring 130x3	FKM
412.2	1	PUMA.12.0150.015	O-ring 32x3.5	FKM
554.2	6	PUMA.00.0090.150	Washer, Ø 6.4 DIN125	A2
800	1	PUMA.00.0370.001	Motor, 370 W 230/400 V 3-phase AC	
847.1	1	PUMA.14.0180.131	Internal magnet, Ø 9 mm	Polypropylene
847.2	1	PUMA.12.0150.076	Drive magnet, 30,(18S) W.-D.14 mm	
900	4	PUMA.00.0090.110	Cylinder head screw, M5x12 DIN84	A2
901	6	PUMA.12.0150.030	Hexagonal screw, M6x55 DIN931	A2
904	1	PUMA.05.0050.007	Set screw, M6x10 DIN914	45H
940	1	PUMA.00.0370.029	Feather key, 5x25x5	

10.3 Parts list for vonTaine® 1010 PVDF/FKM

Pos.	Qty.	Part no.	Designation	Material
101	1	PUMA.14.0180.022	Pump housing without thrust ring	PVDF
113	1	PUMA.00.0370.020	Housing, 30 mm	Aluminium
161 + 314.3	1	PUMA.12.0150.088	Housing canister, 30 mm, with oxide ceramic thrust ring	PVDF
211	1	PUMA.12.0150.135	Centring shaft 30 mm	Oxide ceramic
230	1	PUMA.14.0180.034	Impeller, Ø 90/5.7 mm	PVDF
310	1	PUMA.12.0150.126	Slide bearing	Oxide ceramic
314.1	1	PUMA.12.0150.045	Thrust ring, housing	Oxide ceramic
314.2	1	PUMA.12.0150.055	Thrust ring, impeller	Teflon graphite
400	1	PUMA.12.0150.039	Flat seal, suction side	FKM
412.1	1	PUMA.12.0150.005	O-ring, 128x3	FKM
412.2	1	PUMA.12.0150.015	O-ring, 32x3.5	FKM
554.2	6	PUMA.00.0090.150	Washer, Ø 6.4 DIN125	A2
800	1	PUMA.00.0370.001	Motor, 370 W 230/400 V 3-phase AC	
847.1	1	PUMA.14.0180.156	Internal magnet, Ø 90mm	PVDF
847.2	1	PUMA.12.0150.076	Drive magnet, 30(18S) W.-D.14 mm	
900	4	PUMA.00.0090.110	Cylinder head screw, M5x12 DIN84	A2
901	6	PUMA.12.0150.030	Hexagonal screw, M6x55 DIN931	A2
904	1	PUMA.05.0050.007	Set screw, M6x10 DIN914	45H
940	1	PUMA.00.0370.029	Feather key, 5x25x5	

10.4 Parts list for vonTaine® 1010 PP/EPDM

Pos.	Qty.	Part no.	Designation	Material
101	1	PUMA.14.0180.020	Pump housing without thrust ring	Polypropylene
113	1	PUMA.00.0370.020	Housing, 30 mm	Aluminium
161 + 314.3	1	PUMA.12.0150.086	Housing canister 30 mm, with oxide ceramic thrust ring	Polypropylene
211	1	PUMA.12.0150.135	Centring shaft, 30 mm	Oxide ceramic
230	1	PUMA.14.0180.033	Impeller Ø 90/5.7 mm	Polypropylene
310	1	PUMA.12.0150.126	Slide bearing	Oxide ceramic
314.1	1	PUMA.12.0150.045	Thrust ring, housing	Oxide ceramic

Pos.	Qty.	Part no.	Designation	Material
314.2	1	PUMA.12.0150.055	Thrust ring, impeller	Teflon graphite
400	1	PUMA.12.0150.040	Flat seal, suction side	EPDM
412.1	1	PUMA.12.0150.002	O-ring 130x3	EPDM
412.2	1	PUMA.12.0150.016	O-ring 32x3.5	EPDM
554.2	6	PUMA.00.0090.150	Washer Ø 6.4 DIN125	A2
800	1	PUMA.00.0370.001	Motor, 370 W 230/400 V 3-phase AC	
847.1	1	PUMA.14.0180.131	Internal magnet Ø90 mm	Polypropylene
847.2	1	PUMA.12.0150.076	Drive magnet 30(18S) W.-D.14 mm	
900	4	PUMA.00.0090.110	Cylinder head screw, M5x12 DIN84	A2
901	6	PUMA.12.0150.030	Hexagonal screw, M6x55 DIN931	A2
904	1	PUMA.05.0050.007	Set screw, M6x10 DIN914	45H
940	1	PUMA.00.0370.029	Feather key, 5x25x5	

10.5 Parts list for vonTaine® 1010 PVDF/EPDM

Pos.	Qty.	Part no.	Designation	Material
101	1	PUMA.14.0180.022	Pump housing without thrust ring	PVDF
113	1	PUMA.00.0370.020	Housing, 30 mm	Aluminium
161 + 314.3	1	PUMA.12.0150.088	Housing canister, 30 mm with oxide ceramic thrust ring	PVDF
211	1	PUMA.12.0150.135	Centring shaft 30 mm	Oxide ceramic
230	1	PUMA.14.0180.034	Impeller Ø90/5.7 mm	PVDF
310	1	PUMA.12.0150.126	Slide bearing	Oxide ceramic
314.1	1	PUMA.12.0150.045	Thrust ring, housing	Oxide ceramic
314.2	1	PUMA.12.0150.055	Thrust ring, impeller	Teflon graphite
400	1	PUMA.12.0150.040	Flat seal, suction side	EPDM

Pos.	Qty.	Part no.	Designation	Material
412.1	1	PUMA.12.0150.008	O-ring, 128x3	EPDM
412.2	1	PUMA.12.0150.016	O-ring, 32x3.5	EPDM
554.2	6	PUMA.00.0090.150	Washer, Ø 6.4 DIN125	A2
800	1	PUMA.00.0370.001	Motor, 370 W 230/400 V 3-phase AC	
847.1	1	PUMA.14.0180.156	Internal magnet, Ø 90 mm	PVDF
847.2	1	PUMA.12.0150.076	Drive magnet, 30(18S) W.-D.14 mm	
900	4	PUMA.00.0090.110	Cylinder head screw, M5x12, DIN84	A2
901	6	PUMA.12.0150.030	Hexagonal screw, M6x55, DIN931	A2
904	1	PUMA.05.0050.007	Set screw, M6x10, DIN914	45H

11 Appendix

11.1 Dimensional drawing of vonTaine® 1010 PP and PVDF

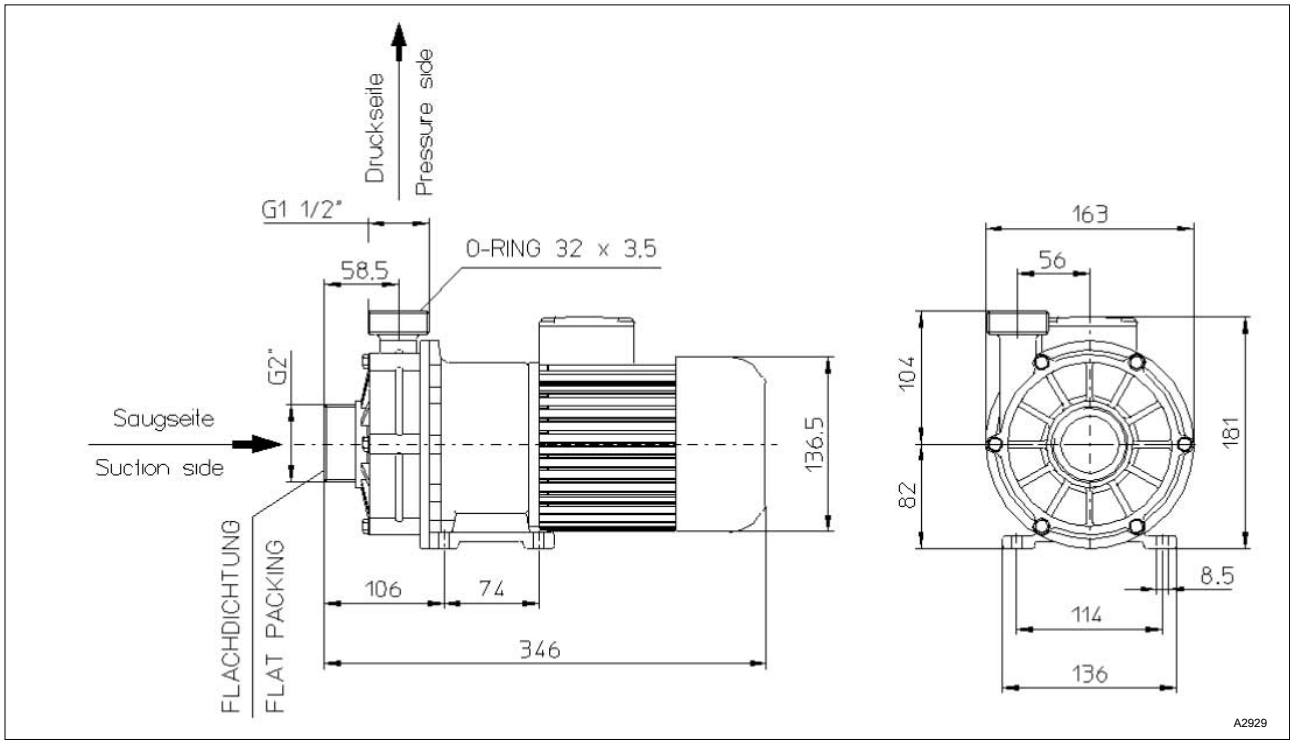

Fig. 14: Dimensional drawing of vonTaine® 1010 PP and PVDF

11.2 Characteristic curves

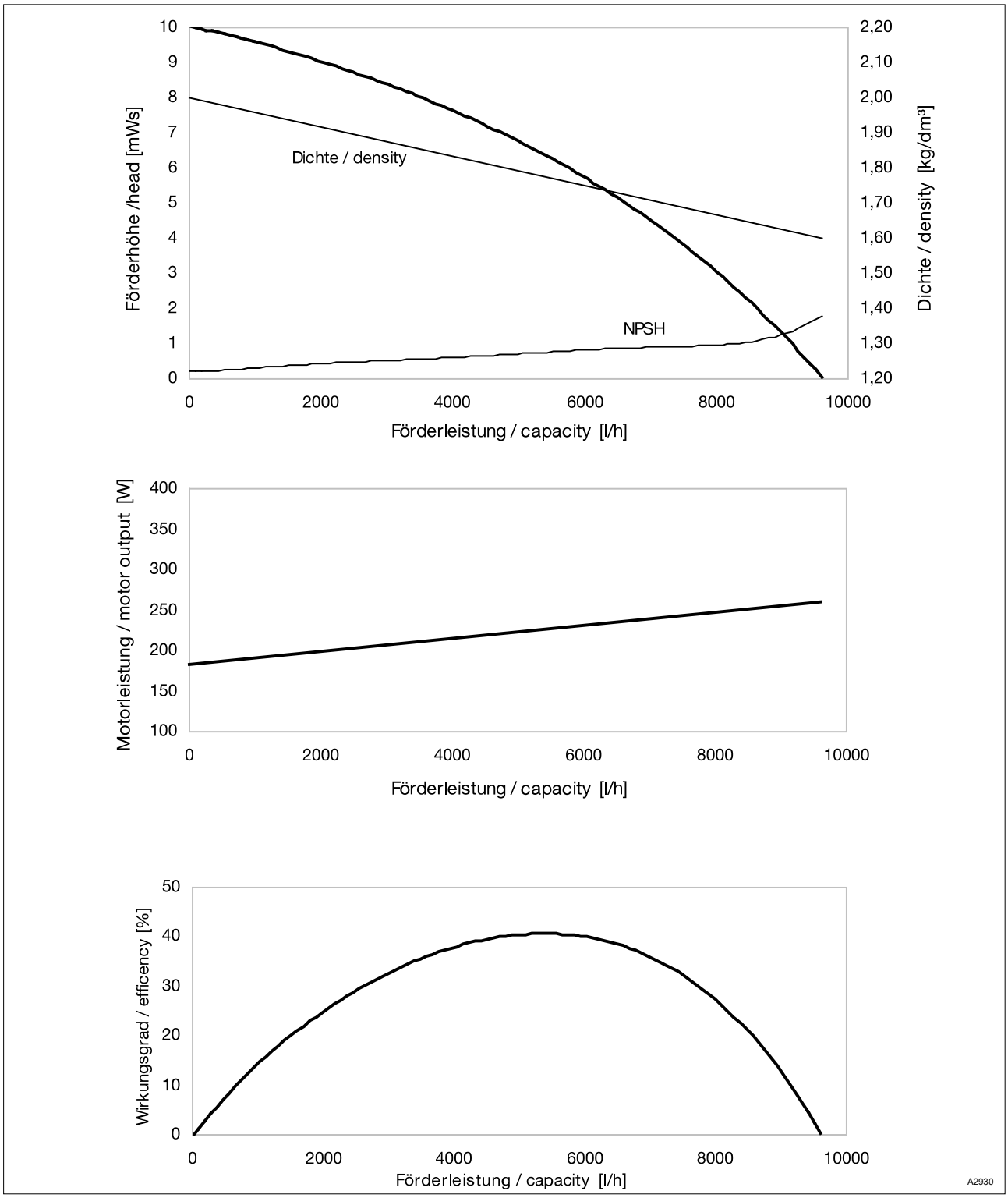

Fig. 15: Characteristic curves: Delivery height (mWs), motor capacity (watts), efficiency (%) all in relation to pump capacity (l/h)

11.3 Motor data sheet

Motor Datenblatt

Motor data sheet
Fiche technique pour moteur

Motor-Typ motor type type du moteur	St.110/50-3		Leistungsfaktor cos φ power factor facteur de puissance	0,755	
Maschinenart type of machine désignation	3-ph. Motor		Wirkungsgrad efficiency rendement	69,5	%
Bauform mounting construction	IM B14		Wärmeklasse temperature class classe d´isolement	F	
Bemessungsleistung rated output puissance nominale	0,37	kW	Anzugsstrom starting current courant de démarrage	4,86	fach fold fois
Schutzart protection class degré de protection	IP55		Anzugsmoment starting torque couple de démarrage	2,7	fach fold fois
Bemessungsspannung rated voltage tension nominale	3-ph. 230/400V (50Hz)		Kippmoment pull-out torque couple de décrochage	2,7	fach fold fois
Bemessungsstrom rated current courant nominal	1,76 / 1,02 A		Umgebungstemperatur ambient temperature température ambiante	max. 40 °C	
Bemessungsfrequenz rated frequency fréquence nominale	50Hz		Schaltung connection branchement	Δ / Y	
Bemessungsdrehzahl rated speed vitesse nominale	2834	U/min. rpm t/mn	Identcode identcode code d´identification		
Pumpentyp pump type type de pompe	Kreiselpumpe mit Magnetkupplung				
Anmerkung comment remarque	Die Daten entsprechen den Angaben der Motorenhersteller. Kenndaten funktionsgleicher Motoren anderer Hersteller ändern sich nur unwesentlich. Angabe ohne Gewähr.				
	The data correspond to the details given by the motor manufacturers. Ratings of motors with the same functions made by other producers show insignificant changes only. This information is supplied without liability.				
	Les données techniques correspondent au descriptif du fabricant des moteurs. Les données techniques de moteurs similaires chez d´autres fabricants varient très peu. Ces données sont d´ordre général.				
ProMinent GmbH · 69123 Heidelberg · Germany				Nr. / No.	
				Datum / Date 29.12.2005	
				A2932	

Fig. 16: Motor data sheet

11.4 EC Declaration of Conformity for Machinery

In accordance with DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, Appendix I, BASIC HEALTH AND SAFETY REQUIREMENTS, section 1.7.4.2. C.

We,

- ProMinent GmbH
- Im Schuhmachergewann 5 - 11
- D - 69123 Heidelberg, Germany,

hereby declare that the product specified in the following, complies with the relevant basic health and safety requirements of the EC Directive, on the basis of its functional concept and design and in the version distributed by us. Any modification to the product not approved by us will invalidate this declaration.

Tab. 2: Extract from the EC Declaration of Conformity

Designation of the product:	Centrifugal pump
Product type:	von Taine
Serial number:	see nameplate on the device
Relevant EC directives:	EC Machinery Directive (2006/42/EC) EC EMC Directive (2004/108/EC) Compliance with the protection targets of the Low Voltage Directive 2006/95/EC according to Appendix I, No. 1.5.1 of the Machinery Directive 2006/42/EC
Harmonised standards applied, in particular:	EN ISO 12100 EN 809
Date:	17.02.2014

You can download the EC Declaration of Conformity at www.prominent.com

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