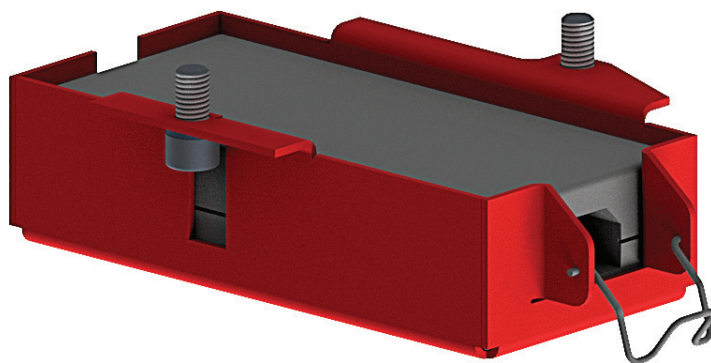




OPERATING INSTRUCTIONS

EN

Translation of the Original

OPS 70 | OPS 100

Integrated power supply pack

Dear Customer,

Thank you for choosing a Pfeiffer Vacuum product. Your new power supply pack is designed to support you in your individual application with full performance and without malfunctions. The name Pfeiffer Vacuum stands for high-quality vacuum technology, a comprehensive and complete range of top-quality products and first-class service. From this extensive, practical experience we have gained a large volume of information that can contribute to efficient deployment and to your personal safety.

In the knowledge that our product must avoid consuming work output, we trust that our product can offer you a solution that supports you in the effective and trouble-free implementation of your individual application.

Please read these operating instructions before putting your product into operation for the first time. If you have any questions or suggestions, please feel free to contact info@pfeiffer-vacuum.de.

Further operating instructions from Pfeiffer Vacuum can be found in the [Download Center](#) on our website.

Disclaimer of liability

These operating instructions describe all models and variants of your product. Note that your product may not be equipped with all features described in this document. Pfeiffer Vacuum constantly adapts its products to the latest state of the art without prior notice. Please take into account that online operating instructions can deviate from the printed operating instructions supplied with your product.

Furthermore, Pfeiffer Vacuum assumes no responsibility or liability for damage resulting from the use of the product that contradicts its proper use or is explicitly defined as foreseeable misuse.

Copyright

This document is the intellectual property of Pfeiffer Vacuum and all contents of this document are protected by copyright. They may not be copied, altered, reproduced or published without the prior written permission of Pfeiffer Vacuum.

We reserve the right to make changes to the technical data and information in this document.

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1 About this manual



IMPORTANT

Read carefully before use.

Keep the manual for future consultation.

1.1 Validity

This operating instructions is a customer document of Pfeiffer Vacuum. The operating instructions describe the functions of the named product and provide the most important information for the safe use of the device. The description is written in accordance with the valid directives. The information in this operating instructions refers to the product's current development status. The document shall remain valid provided that the customer does not make any changes to the product.

1.1.1 Applicable documents

Designation	Number
Declaration of conformity	A component of these instructions

1.1.2 Variants

- OPS 70
- OPS 100

1.2 Target group

These operating instructions are aimed at all persons performing the following activities on the product:

- Transportation
- Setup (Installation)
- Usage and operation
- Decommissioning
- Maintenance and cleaning
- Storage or disposal

The work described in this document is only permitted to be performed by persons with the appropriate technical qualifications (expert personnel) or who have received the relevant training from Pfeiffer Vacuum.

1.3 Conventions

1.3.1 Instructions in the text

Usage instructions in the document follow a general structure that is complete in itself. The required action is indicated by an individual step or multi-part action steps.

Individual action step

A horizontal, solid triangle indicates the only step in an action.

- This is an individual action step.

Sequence of multi-part action steps

The numerical list indicates an action with multiple necessary steps.

1. Step 1
2. Step 2
3. ...

1.3.2 Pictographs

Pictographs used in the document indicate useful information.



Note



Tip

1.3.3 Stickers on the product

This section describes all the stickers on the product along with their meaning.

	Rating plate (example) Rating plates of the devices are affixed to the housing where they can be clearly seen
	Test seal: The test seal provides information regarding additional certifications

Tbl. 1: Stickers on the product

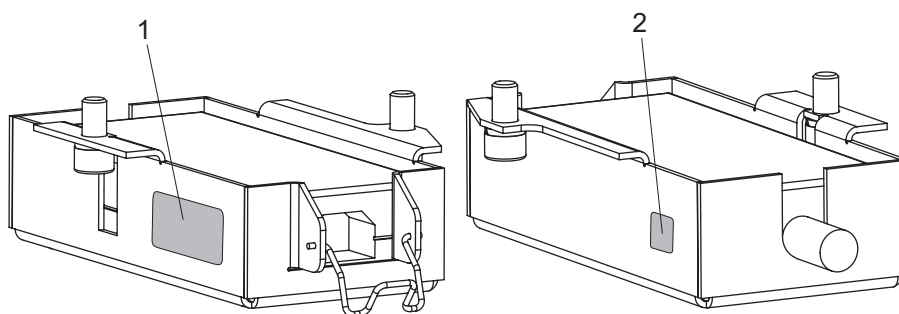


Fig. 1: Position of the stickers on the product

- 1 Rating plate 2 CAN/USA test seal

1.3.4 Abbreviations

Abbreviation	Meaning in this document
AC	Alternating Current voltage
DC	Direct Current voltage
FKM	Fluorinated rubber
OPS	On-board power supply pack
PE	Protective earth (earthed conductor)
TC	Electronic drive unit (turbo controller)
WAF	Width across flats
X3	15-pole D-Sub connecting socket on the electronic drive unit

Tbl. 2: Abbreviations used in this document

2 Safety

2.1 General safety information

The following 4 risk levels and 1 information level are taken into account in this document.

DANGER

Immediately pending danger

Indicates an immediately pending danger that will result in death or serious injury if not observed.

- Instructions to avoid the danger situation

WARNING

Potential pending danger

Indicates a pending danger that could result in death or serious injury if not observed.

- Instructions to avoid the danger situation

CAUTION

Potential pending danger

Indicates a pending danger that could result in minor injuries if not observed.

- Instructions to avoid the danger situation

NOTICE

Danger of damage to property

Is used to highlight actions that are not associated with personal injury.

- Instructions to avoid damage to property



Notes, tips or examples indicate important information about the product or about this document.

2.2 Safety instructions

All safety instructions in this document are based on the results of the risk assessment carried out in accordance with Low Voltage Directive 2014/35/EU. Where applicable, all life cycle phases of the product were taken into account.

Risks during installation

WARNING

Risk of fatal injury due to electric shock on account of incorrect installation

The device's power supply uses life-threatening voltages. Unsafe or improper installation can lead to life-threatening situations from electric shocks obtained from working with or on the unit.

- Ensure safe integration into an emergency off safety circuit.
- Do not carry out your own conversions or modifications on the unit.

WARNING

Danger of cut injuries from unexpected start up.

The use of mating plugs of the electronic drive unit (accessories) enables the automatic run-up of the vacuum pump as soon the power is turned on. Attaching mating plugs before or during the installation leads to the movement of parts hence the risk of cut injuries by sharp-edged in the exposed high vacuum flange.

- Only connect mating plugs after the mechanical installation.
- Only switch on the vacuum pump immediately prior to operation.

WARNING

Risk of danger to life through missing mains disconnection device

The vacuum pump and electronic drive unit are **not** equipped with a mains disconnection device (mains switch).

- ▶ Install a mains disconnection device according to SEMI-S2.
- ▶ Install a circuit breaker with an interruption rating of at least 10,000 A.

Risks during operation

WARNING

Danger of cut injuries from unexpected start up.

The use of mating plugs of the electronic drive unit (accessories) enables the automatic run-up of the vacuum pump as soon the power is turned on. Attaching mating plugs before or during the installation leads to the movement of parts hence the risk of cut injuries by sharp-edged in the exposed high vacuum flange.

- ▶ Only connect mating plugs after the mechanical installation.
- ▶ Only switch on the vacuum pump immediately prior to operation.

WARNING

Risk of burns in case of contact with hot surfaces

For the operator's safety, the products are designed to avoid thermal risk. Depending on the application, the conditions of use generate high temperatures which require extra caution from users (surfaces > 65 °C).

- ▶ Pay attention to the marking of hot surfaces indicated by safety labels.
- ▶ Wait for the product to fully cool down before working on it.
- ▶ Protective gloves must be worn in accordance with standard EN ISO 21420.

Risks during maintenance

WARNING

Danger to life from electric shock during maintenance and service work

The device is only completely de-energized when the mains plug has been disconnected and the vacuum pump is at a standstill. There is a danger to life from electric shock when making contact with live components.

- ▶ Before performing all work, switch off the main switch.
- ▶ Wait until the vacuum pump comes to a standstill (rotation speed =0).
- ▶ Disconnect all connection cables.
- ▶ Remove the mains plug from the device.
- ▶ Secure the device against unintentional restarting.

Recycling and disposal

WARNING

Health hazard through poisoning from toxic contaminated components or devices

Toxic process media result in contamination of devices or parts of them. During maintenance work, there is a risk to health from contact with these poisonous substances. Illegal disposal of toxic substances causes environmental damage.

- ▶ Take suitable safety precautions and prevent health hazards or environmental pollution by toxic process media.
- ▶ Decontaminate affected parts before carrying out maintenance work.
- ▶ Wear protective equipment.

Risks during troubleshooting

⚠ WARNING**Danger to life from electric shock in the event of a fault**

In the event of a fault, devices connected to the mains may be live. There is a danger to life from electric shock when making contact with live components.

- ▶ Always keep the mains connection freely accessible so you can disconnect it at any time.

2.3 Safety precautions

**Duty to provide information on potential dangers**

The product holder or user is obliged to make all operating personnel aware of dangers posed by this product.

Every person who is involved in the installation, operation or maintenance of the product must read, understand and adhere to the safety-related parts of this document.

**Infringement of conformity due to modifications to the product**

The Declaration of Conformity from the manufacturer is no longer valid if the operator changes the original product or installs additional equipment.

- Following the installation into a system, the operator is required to check and re-evaluate the conformity of the overall system in the context of the relevant European Directives, before commissioning that system.

General safety precautions when handling the product

- ▶ Use only power supply packs that comply with the applicable safety regulations.
- ▶ Observe all applicable safety and accident prevention regulations.
- ▶ Check that all safety measures are observed at regular intervals.
- ▶ Recommendation: Establish a secure connection to the earthed conductor (PE); protection class I.
- ▶ Never disconnect plug connections during operation.
- ▶ Keep lines and cables away from hot surfaces ($> 70^{\circ}\text{C}$).
- ▶ Do not carry out your own conversions or modifications on the unit.
- ▶ Observe the unit protection class prior to installation or operation in other environments.

2.4 Limits of use of the product

	OPS 70	OPS 100
Installation location	weatherproof (internal space)	weatherproof (internal space)
Air pressure	750 hPa to 1060 hPa	750 hPa to 1060 hPa
Installation altitude	max. 2000 m	max. 2000 m
Rel. air humidity	max. 80%, at $T < 31^{\circ}\text{C}$, up to max. 50% at $T < 40^{\circ}\text{C}$	max. 80%, at $T < 31^{\circ}\text{C}$, up to max. 50% at $T < 40^{\circ}\text{C}$
Protection class (according to IEC 61010)	I	I
Degree of pollution (according to IEC 61010)	2	2
Overvoltage category	II	II
Protection degree	IP20	IP20
Ambient temperature	0° to $+40^{\circ}\text{C}$	$+5^{\circ}$ to $+50^{\circ}\text{C}$

Tbl. 3: Permissible ambient conditions

2.5 Proper use

- The power supply packs are used exclusively to provide a voltage supply to the electronic drive units of Pfeiffer Vacuum vacuum pumps and their accessories.

2.6 Foreseeable improper use

Improper use of the product invalidates all warranty and liability claims. Any use that is counter to the purpose of the product, whether intentional or unintentional, is regarded as improper use; in particular:

- Connection to the current supply that does not comply with the provisions of IEC 61010 or IEC 60950
- Operating modes that may result in hazardous situations with connected devices if unintentionally or automatically activated
- Operation with excessive irradiated heat output
- Use in areas with ionizing radiation
- Operation in potentially explosive areas
- Use of accessories or spare parts that are not listed in these instructions

2.7 Personnel qualification

The work described in this document may only be carried out by persons who have appropriate professional qualifications and the necessary experience or who have completed the necessary training as provided by Pfeiffer Vacuum.

Training people

1. Train the technical personnel on the product.
2. Only let personnel to be trained work with and on the product when under the supervision of trained personnel.
3. Only allow trained technical personnel to work with the product.
4. Before starting work, make sure that the commissioned personnel have read and understood these operating instructions and all applicable documents, in particular the safety, maintenance and repair information.

2.7.1 Ensuring personnel qualification

Specialist for mechanical work

Only a trained specialist may carry out mechanical work. Within the meaning of this document, specialists are people responsible for construction, mechanical installation, troubleshooting and maintenance of the product, and who have the following qualifications:

- Qualification in the mechanical field in accordance with nationally applicable regulations
- Knowledge of this documentation

Specialist for electrotechnical work

Only a trained electrician may carry out electrical engineering work. Within the meaning of this document, electricians are people responsible for electrical installation, commissioning, troubleshooting, and maintenance of the product, and who have the following qualifications:

- Qualification in the electrical engineering field in accordance with nationally applicable regulations
- Knowledge of this documentation

In addition, these individuals must be familiar with applicable safety regulations and laws, as well as the other standards, guidelines, and laws referred to in this documentation. The above individuals must have an explicitly granted operational authorization to commission, program, configure, mark, and earth devices, systems, and circuits in accordance with safety technology standards.

Trained individuals

Only adequately trained individuals may carry out all works in other transport, storage, operation and disposal fields. Such training must ensure that individuals are capable of carrying out the required activities and work steps safely and properly.

2.7.2 Personnel qualification for maintenance and repair



Advanced training courses

Pfeiffer Vacuum offers advanced training courses to maintenance levels 2 and 3.

Adequately trained individuals are:

- **Maintenance level 1**
 - Customer (trained specialist)
- **Maintenance level 2**
 - Customer with technical education
 - Pfeiffer Vacuum service technician
- **Maintenance level 3**
 - Customer with Pfeiffer Vacuum service training
 - Pfeiffer Vacuum service technician

2.7.3 Advanced training with Pfeiffer Vacuum

For optimal and trouble-free use of this product, Pfeiffer Vacuum offers a comprehensive range of courses and technical trainings.

For more information, please contact [Pfeiffer Vacuum technical training](#).

3 Product description

3.1 Function

OPS power supply packs are used exclusively to provide an on-board voltage supply to the electronic drive unit of Pfeiffer Vacuum vacuum pumps. The output voltage "**DC out**" is safely isolated from the mains input voltage "**AC in**".

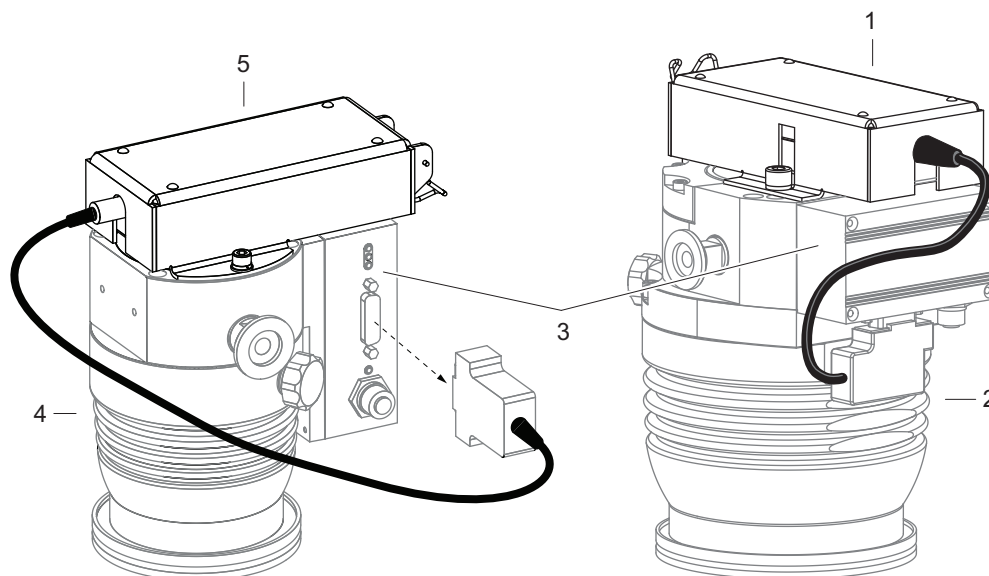


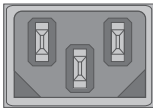
Fig. 2: Example design of OPS 70 | OPS 100

- | | |
|--------------------------------|-----------------------|
| 1 OPS 100 | 4 Turbopump HiPace 80 |
| 2 Turbopump HiPace 300 | 5 OPS 70 |
| 3 Electronic drive unit TC 110 | |

3.2 Identifying the product

- To ensure clear identification of the product when communicating with Pfeiffer Vacuum, always keep all of the information on the rating plate to hand.
- Learn about certifications through test seals on the product or at www.certipedia.com with company ID no. 000024550.

3.3 Connections

	AC in Mains connection (IEC 320 C14)
	X3 D-Sub socket with 15 pins for the voltage supply.

Tbl. 4: Connection description for OPS 70 | OPS 100

3.4 Scope of delivery

- Power supply pack OPS
- Fixing materials
- Operating instructions

4 Installation

4.1 Preparing for installation

General comments regarding installation

- ▶ Choose a site for installation where access to the product and to supply lines is possible at all times.
- ▶ Respect the ambient conditions stated for the area of use.
- ▶ Only use the fixing holes provided.
- ▶ Never operate the power supply pack separately from the turbopump.
- ▶ Ensure that the cooling surface of the power supply pack is securely connected with the bottom part of the turbopump.

4.2 Connection diagram

Bridges are installed ex factory in the power supply plug of the OPS.



Automatic start

After bypassing the contacts at pins 2, 5 and 7 on the "X3" connection or when using a connection cable with bridges and applying the supply voltage, the turbopump starts up immediately.

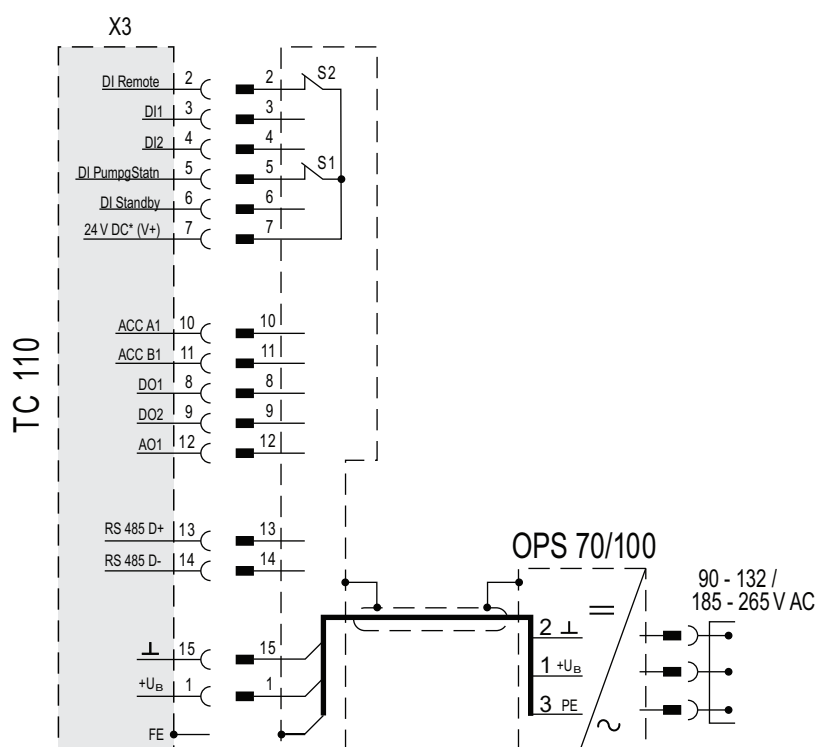


Fig. 3: Connection diagram for HiPace 300 with TC 110 and OPS 70 | OPS 100

4.3 Establishing the electric connection

⚠ WARNING

Risk of fatal injury due to electric shock on account of incorrect installation

The device's power supply uses life-threatening voltages. Unsafe or improper installation can lead to life-threatening situations from electric shocks obtained from working with or on the unit.

- ▶ Ensure safe integration into an emergency off safety circuit.
- ▶ Do not carry out your own conversions or modifications on the unit.

⚠ WARNING

Danger of cut injuries from unexpected start up.

The use of mating plugs of the electronic drive unit (accessories) enables the automatic run-up of the vacuum pump as soon the power is turned on. Attaching mating plugs before or during the installation leads to the movement of parts hence the risk of cut injuries by sharp-edged in the exposed high vacuum flange.

- ▶ Only connect mating plugs after the mechanical installation.
- ▶ Only switch on the vacuum pump immediately prior to operation.

⚠ WARNING

Risk of danger to life through missing mains disconnection device

The vacuum pump and electronic drive unit are **not** equipped with a mains disconnection device (mains switch).

- ▶ Install a mains disconnection device according to SEMI-S2.
- ▶ Install a circuit breaker with an interruption rating of at least 10,000 A.

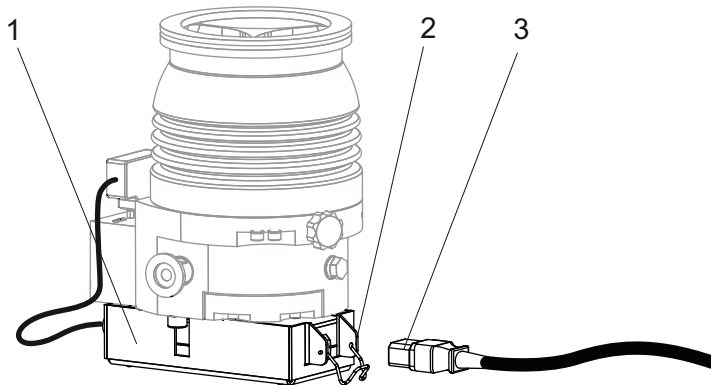


Fig. 4: Example connection to the mains power supply

- | | |
|-----------------------------|----------------------|
| 1 Power supply pack OPS 100 | 3 Power supply cable |
| 2 Mains connection "AC in" | |

Connect to mains power supply

1. Ensure the correct supply voltage.
2. Order a corresponding power supply cable from the Pfeiffer Vacuum accessories range.
3. Plug the power supply cable into the "AC in" port.
4. Secure the connection with the mounting bracket.
5. Always ensure a secure connection to the earthed conductor (PE), protection class I.

5 Operation

5.1 Switching on

WARNING

Danger of cut injuries from unexpected start up.

The use of mating plugs of the electronic drive unit (accessories) enables the automatic run-up of the vacuum pump as soon the power is turned on. Attaching mating plugs before or during the installation leads to the movement of parts hence the risk of cut injuries by sharp-edged in the exposed high vacuum flange.

- ▶ Only connect mating plugs after the mechanical installation.
- ▶ Only switch on the vacuum pump immediately prior to operation.

WARNING

Risk of burns in case of contact with hot surfaces

For the operator's safety, the products are designed to avoid thermal risk. Depending on the application, the conditions of use generate high temperatures which require extra caution from users (surfaces > 65 °C).

- ▶ Pay attention to the marking of hot surfaces indicated by safety labels.
- ▶ Wait for the product to fully cool down before working on it.
- ▶ Protective gloves must be worn in accordance with standard EN ISO 21420.

Procedure

1. Connect the mains cable to the mains power supply on the customer-side.
2. Switch on the mains power supply.

After applying the operating voltage, the electronic drive unit carries out a self-test to check the supply voltage. After completing the self-test successfully, the turbopump starts and activates connected additional equipment according to the configuration.

5.2 Switching off

Procedure

1. Disconnect the power supply pack from the mains to disconnect the current supply completely.



Unplugging the mains plug

Unplugging the mains plug during running operation immediately de-energizes the power supply pack and the devices that are connected to it.

6 Maintenance

⚠ WARNING

Danger to life from electric shock during maintenance and service work

The device is only completely de-energized when the mains plug has been disconnected and the vacuum pump is at a standstill. There is a danger to life from electric shock when making contact with live components.

- ▶ Before performing all work, switch off the main switch.
- ▶ Wait until the vacuum pump comes to a standstill (rotation speed = 0).
- ▶ Disconnect all connection cables.
- ▶ Remove the mains plug from the device.
- ▶ Secure the device against unintentional restarting.

The power supply pack cannot be repaired. Replacement of the on-board power supply pack is essentially the same procedure for all specified pump types.

Prerequisites

- Turbopump off
- Vacuum system vented to atmospheric pressure
- Electrical supply disconnected

Approach in case of a defect

- ▶ In case of a defect, replace the entire device.

6.1 Disassembling the power supply pack

Required tools

- Allen key, **WAF 4**
- Allen key, **WAF 6**

Required aids

- Protective cap

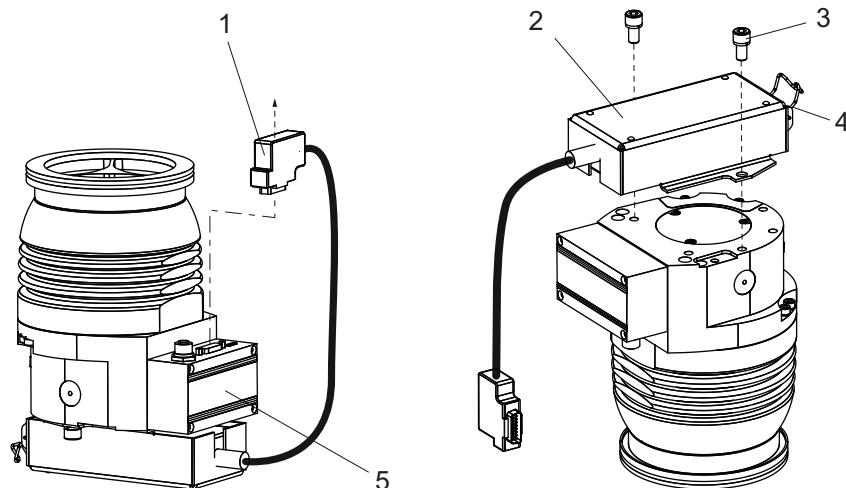


Fig. 5: Example disassembly of OPS 100 from HiPace 300

- | | |
|---------------------------------|--|
| 1 Connection plug | 4 Mains connection with mounting bracket |
| 2 OPS 100 | 5 Electronic drive unit |
| 3 Interior hexagon socket screw | |

Disassembling the power supply pack

1. Remove the turbopump from the system if necessary.
2. Seal all flange openings with the original protective covers.
3. Place the turbopump on the closed high vacuum flange.
4. Disconnect the connection plug from the TC.

5. Unscrew both interior hexagon socket screws from the power supply pack.
6. Remove the power supply pack from the turbopump.

6.2 Mounting the power supply pack

Required tools

- Allen key, **WAF 4**
- Allen key, **WAF 6**
- Calibrated torque wrench
- Hexagon socket, **WAF 4.5**

Required aids

- Protective cap

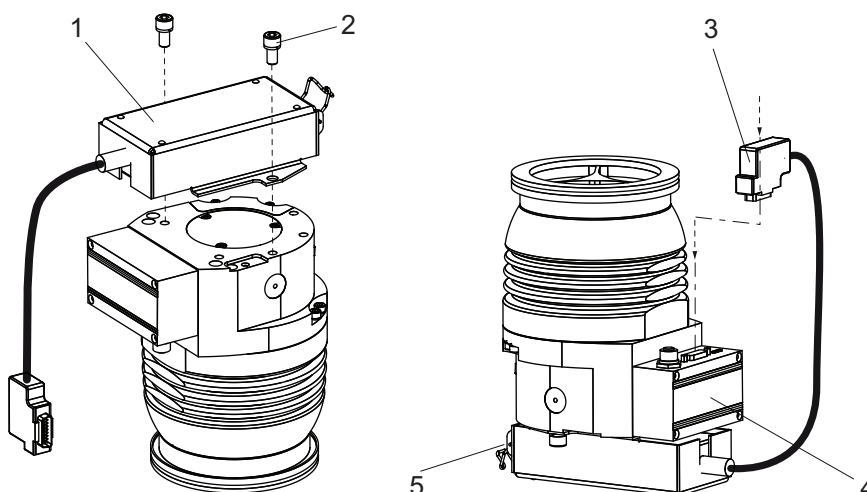


Fig. 6: Example mounting the OPS 100 onto HiPace 300

- | | |
|---------------------------------|--|
| 1 OPS 100 | 4 Electronic drive unit |
| 2 Interior hexagon socket screw | 5 Mains connection with mounting bracket |
| 3 Connection plug | |

Mounting the power supply pack

1. Seal all flange openings with the original protective covers.
2. Place the turbopump on the closed high vacuum flange.
3. Secure the OPS at the threaded holes provided on the bottom part of the turbopump.
4. Connect the connecting cable to the 15-pin D-sub socket on the electronic drive unit.
 - Tightening torque of the spacer bolt of the D-sub socket: **0.25 - 0.3 Nm**
5. Connect the mains cable to the "AC in" port on the OPS power supply pack.
6. Connect the mounting bracket of the power supply plug.

6.3 Cleaning

Prerequisites

- Device is switched off
- Mains plug is removed

Required consumables

- Dry, clean and lint-free cloth

Cleaning the device

- ▶ Clean the device with a dry, clean and lint-free cloth.
- ▶ Do **not use cleaning agents**.

7 Recycling and disposal

WARNING

Health hazard through poisoning from toxic contaminated components or devices

Toxic process media result in contamination of devices or parts of them. During maintenance work, there is a risk to health from contact with these poisonous substances. Illegal disposal of toxic substances causes environmental damage.

- ▶ Take suitable safety precautions and prevent health hazards or environmental pollution by toxic process media.
- ▶ Decontaminate affected parts before carrying out maintenance work.
- ▶ Wear protective equipment.



Environmental protection

You **must** dispose of the product and its components in accordance with all applicable regulations for protecting people, the environment and nature.

- Help to reduce the wastage of natural resources.
- Prevent contamination.

7.1 General disposal information

Pfeiffer Vacuum products contain materials that you must recycle.

- ▶ Dispose of our products according to the following:
 - Iron
 - Aluminium
 - Copper
 - Synthetic
 - Electronic components
 - Oil and fat, solvent-free
- ▶ Observe the special precautionary measures when disposing of:
 - Fluoroelastomers (FKM)
 - Potentially contaminated components that come into contact with media

7.2 Disposing of the power supply pack

Electronic components and their housings contain material that must be recycled.

- ▶ Dispose of electronic components in a safe manner according to locally applicable regulations.

8 Malfunctions

WARNING

Danger to life from electric shock in the event of a fault

In the event of a fault, devices connected to the mains may be live. There is a danger to life from electric shock when making contact with live components.

- Always keep the mains connection freely accessible so you can disconnect it at any time.

9 Service solutions by Pfeiffer Vacuum

We offer first-class service

High vacuum component service life, in combination with low downtime, are clear expectations that you place on us. We meet your needs with efficient products and outstanding service.

We are always focused on perfecting our core competence – servicing of vacuum components. Once you have purchased a product from Pfeiffer Vacuum, our service is far from over. This is often exactly where service begins. Obviously, in proven Pfeiffer Vacuum quality.

Our professional sales and service employees are available to provide you with reliable assistance, worldwide. Pfeiffer Vacuum offers an entire range of services, from [original replacement parts](#) to [service contracts](#).

Make use of Pfeiffer Vacuum service

Whether preventive, on-site service carried out by our field service, fast replacement with mint condition replacement products, or repair carried out in a [Service Center](#) near you – you have various options for maintaining your equipment availability. You can find more detailed information and addresses on our homepage, in the [Pfeiffer Vacuum Service](#) section.

You can obtain advice on the optimal solution for you, from your [Pfeiffer Vacuum representative](#).

For fast and smooth service process handling, we recommend the following:



1. Download the up-to-date form templates.
 - [Explanations of service requests](#)
 - [Service requests](#)
 - [Contamination declaration](#)



- a) Remove and store all accessories (all external parts, such as valves, protective screens, etc.).
- b) If necessary, drain operating fluid/lubricant.
- c) If necessary, drain coolant.
2. Complete the service request and contamination declaration.



3. Send the forms by email, fax, or post to your local [Service Center](#).

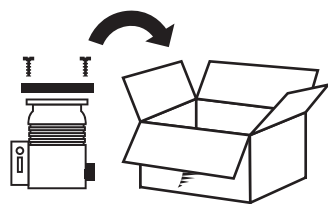


4. You will receive an acknowledgment from Pfeiffer Vacuum.

PFEIFFER VACUUM

Submission of contaminated products

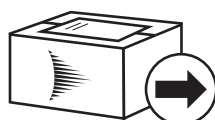
No microbiological, explosive, or radiologically contaminated products will be accepted. Where products are contaminated, or the contamination declaration is missing, Pfeiffer Vacuum will contact you before starting service work. Depending on the product and degree of pollution, **additional decontamination costs** may be incurred.



5. Prepare the product for transport in accordance with the provisions in the contamination declaration.
 - a) Neutralize the product with nitrogen or dry air.
 - b) Seal all openings with blind flanges, so that they are airtight.
 - c) Shrink-wrap the product in suitable protective foil.
 - d) Package the product in suitable, stable transport containers only.
 - e) Maintain applicable transport conditions.



6. Attach the contamination declaration to the **outside** of the packaging.



7. Now send your product to your local Service Center.



8. You will receive an acknowledgment/quotation, from Pfeiffer Vacuum.

PFEIFFER VACUUM

Our sales and delivery conditions and repair and maintenance conditions for vacuum devices and components apply to all service orders.

10 Spare parts

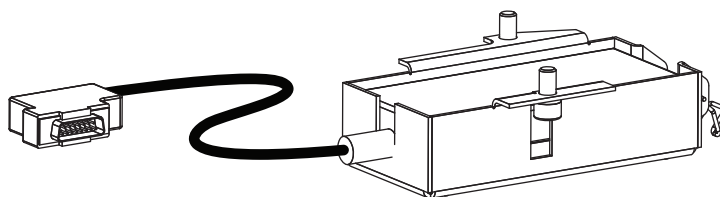


Fig. 7: Spare part for OPS 70 | OPS 100

Position	Designation	Order number
1	Power supply pack OPS 70 with power supply plug	PM 061 697 -AX
2	Power supply pack OPS 100 with power supply plug	PM 061 680 -AX

Tbl. 5: Available spare parts

11 Accessories

Description	Order number
Mains cable 230 V AC, CEE 7/7 to C13, 3 m	P 4564 309 ZA
Mains cable 115 V AC, NEMA 5-15 to C13, 3 m	P 4564 309 ZE
Mains cable 208 V AC, NEMA 6-15 to C13, 3 m	P 4564 309 ZF

Tbl. 6: OPS 70 | OPS 100 - accessories

12 Technical data and dimensions

12.1 Technical data

Selection field	OPS 70, integrated power supply
Part number	PM 061 697 AX
Degree of pollution	2
Overvoltage category	Category II
Ambient temperature	0 – 40 °C
Input voltage(s)	115 – 230 V AC (-20/+15 %), 50/60 Hz
Input voltage: tolerance	-20/+15 %
Power consumption max.	90 VA
Output voltage	24 (±2 %) V DC
Output current	3 A
Protection degree	IP20
Weight	0.5 kg

Tbl. 7: OPS 70

Selection field	OPS 100, integrated power supply
Part number	PM 061 680 AX
Degree of pollution	2
Overvoltage category	Category II
Ambient temperature	5 – 50 °C
Input voltage(s)	115 – 230 V AC (-20/+15 %), 50 Hz
Input voltage: tolerance	-20/+15 %
Power consumption max.	125 VA
Output voltage	24 (±2 %) V DC
Output current	4.2 A
Protection degree	IP20
Weight	1 kg

Tbl. 8: OPS 100

12.2 Dimensions

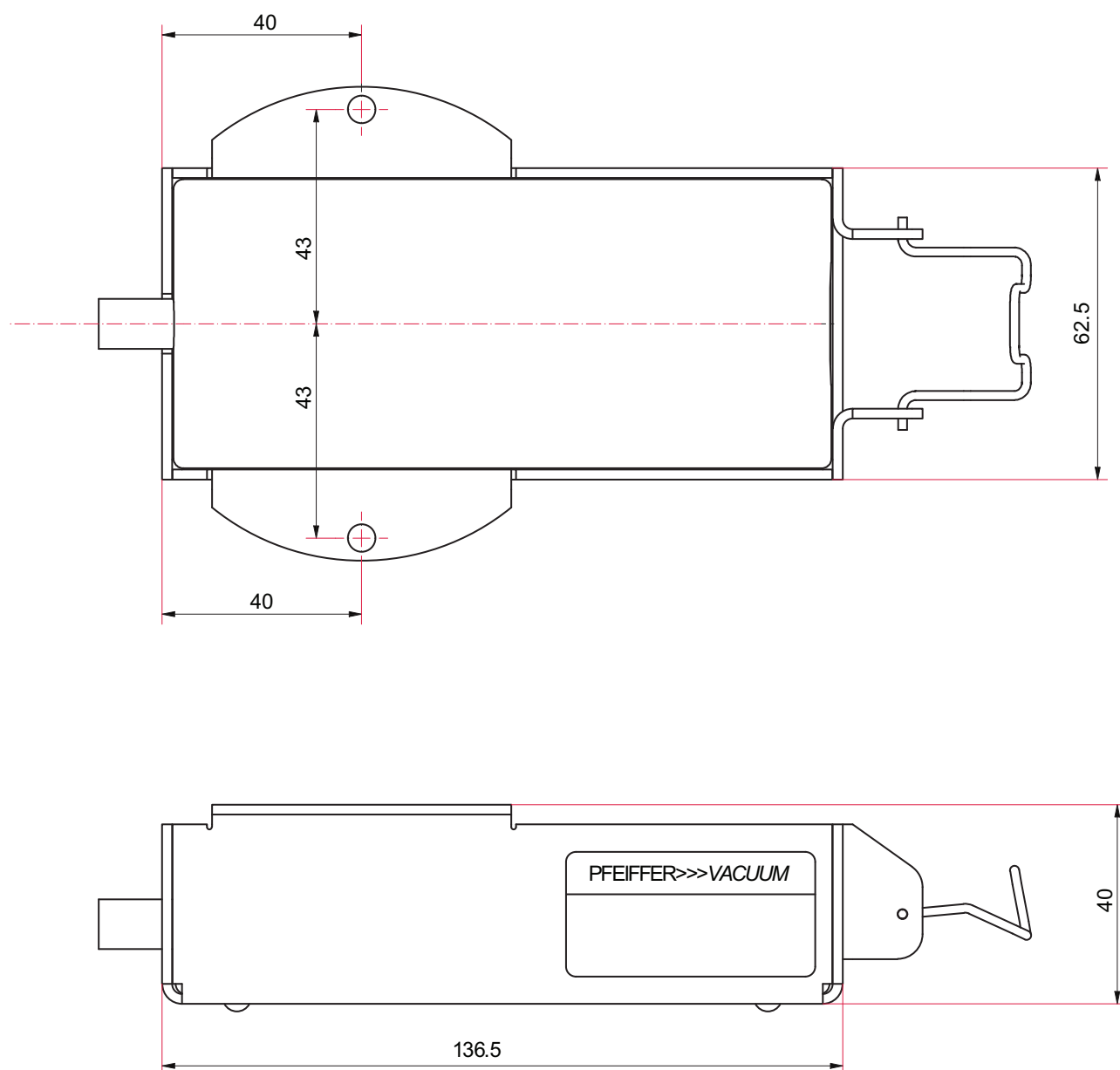


Fig. 8: Dimensions OPS 70
Dimensions in mm

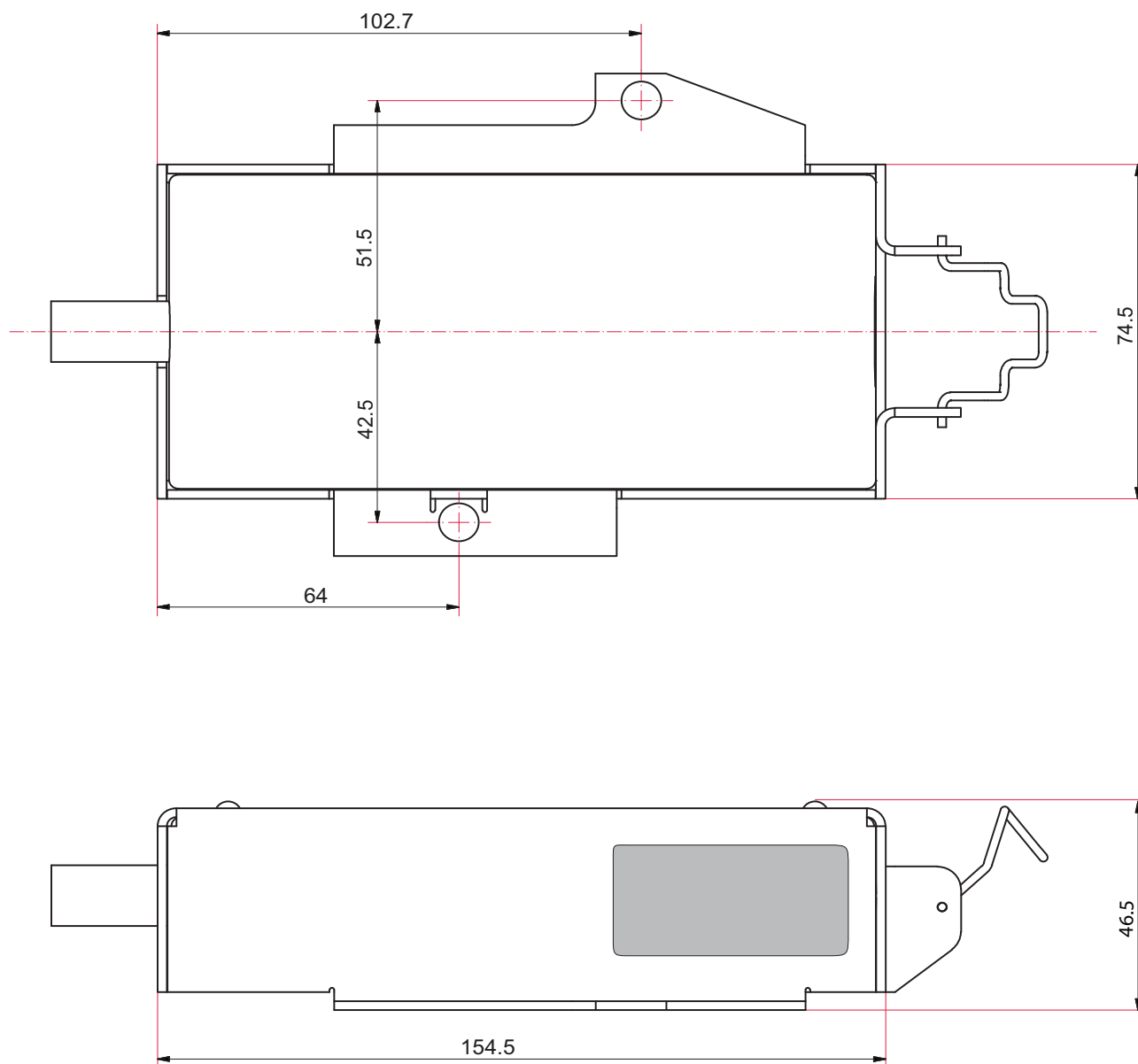


Fig. 9: Dimensions OPS 100
Dimensions in mm

EC Declaration of Conformity

This declaration of conformity has been issued under the sole responsibility of the manufacturer.

Declaration for product(s) of the type:

Power supply pack

OPS 70

OPS 100

We hereby declare that the listed product satisfies all relevant provisions of the following **European Directives**.

Low voltage 2014/35/EC

Electromagnetic compatibility 2014/30/EU

Restriction of the use of certain hazardous substances 2011/65/EU

Restriction of the use of certain hazardous substances, delegated directive 2015/863/EU

Harmonized standards and applied national standards and specifications:

DIN EN ISO 12100 : 2011

DIN EN 62061 : 2016

DIN EN 1012-2 : 2011

DIN ISO 21360-1 : 2016

DIN EN IEC 61000-3-2 : 2019

ISO 21360-4 : 2018

DIN EN 61000-3-3 : 2020

DIN EN IEC 63000 : 2019

DIN EN 61010-1 : 2020

Semi F47-0200

DIN EN 61326-1 : 2013

Semi S2-0706

Signature:



Pfeiffer Vacuum GmbH
Berliner Straße 43
35614 Asslar
Germany

(Daniel Sälzer)
Managing Director

Asslar, 2022-11-23



UK Declaration of Conformity

This declaration of conformity has been issued under the sole responsibility of the manufacturer.

Declaration for product(s) of the type:

Power supply pack

OPS 70

OPS 100

We hereby declare that the listed product satisfies all relevant provisions of the following **British Directives**.

Electrical Equipment (Safety) Regulations 2016

Electromagnetic Compatibility Regulations 2016

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Applied standards and specifications:

EN ISO 12100:2010

EN IEC 62061:2021

EN 1012-2+A1:1996

ISO 21360-1:2020

EN IEC 61000-3-2+A1:2019

ISO 21360-4:2018

EN 61000-3-3+A2:2013

IEC 63000:2018

EN 61010-1+A1:2017

Semi F47-0200

EN IEC 61326-1:2021

Semi S2-0706

The manufacturer's authorized representative in the United Kingdom and the authorized agent for compiling the technical documentation is Pfeiffer Vacuum Ltd, 16 Plover Close, Interchange Park, MK169PS Newport Pagnell.

Signature:



(Daniel Sälzer)
Managing Director

Pfeiffer Vacuum GmbH
Berliner Straße 43
35614 Asslar
Germany

Asslar, 2022-11-23

**UK
CA**



VACUUM SOLUTIONS FROM A SINGLE SOURCE

Pfeiffer Vacuum stands for innovative and custom vacuum solutions worldwide, technological perfection, competent advice and reliable service.

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From a single component to complex systems:

We are the only supplier of vacuum technology that provides a complete product portfolio.

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We support you with your plant layout and provide first-class on-site service worldwide.

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Are you looking for a
perfect vacuum solution?
Please contact us

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