



OPERATING INSTRUCTIONS

EN

Translation of the original instructions

HIPACE AIR COOLING UNIT

PFEIFFER  *VACUUM*

Table of contents

1	Validity	3
2	Proper use	3
3	Air cooling units, 24 V DC	3
3.2	HiPace 60 P, HiPace 80, SplitFlow 50	4
3.3	HiPace 300, TC 110/TC 120	4
3.4	HiPace 300, TC 400	5
3.5	HiPace 400, HiPace 700, HiPace 800	5
4	Air cooling units, 115 / 230 V DC	6
4.1	HiPace 60 P, HiPace 80, SplitFlow 50	6
4.2	HiPace 300, 400, 700, 800	6
4.3	Electrical connection	7
5	Air cooling units, 24 V DC for TeleTC cable 400	7
6	Dimensions	8
	Declaration of conformity	9

1 Validity

This operating manual is for customers of Pfeiffer Vacuum. It describes the functioning of the designated product and provides the most important information for safe use of the unit. The description follows applicable EU guidelines. All information provided in this operating manual refers to the current state of the product's development. The documentation remains valid as long as the customer does not make any changes to the product.

Up-to-date operating instructions can also be downloaded from www.pfeiffer-vacuum.com.

2 Proper use

- The air cooling serves to the cooling of Pfeiffer Vacuum turbopumps at ambient temperatures of max. + 35 °C.
- Type selection according to the accessories recommendation of the respective turbopump.

Improper use will cause all claims for liability and warranties to be forfeited. Improper use is defined as usage for purposes deviating from those mentioned above, especially:

- connection to pumps or units which are not suitable for this purpose according to their operating instructions
- connection to units which have exposed voltage-carrying parts

3 Air cooling units, 24 V DC

Standard:	PM Z01 300 A PM Z01 348 A	PM Z01 301 A PM Z01 361 A	PM Z01 302 A PM Z01 362 A	PM Z01 303 A PM Z01 363 A
Shielded variants	PM Z01 360 A			
Power consumption	1.32 W	3.84 W	3.84 W	3.84 W
Control voltage	24 V DC	24 V DC	24 V DC	24 V DC
Electric connection	M8	M8	M12	M12

3.1 HiPace 30

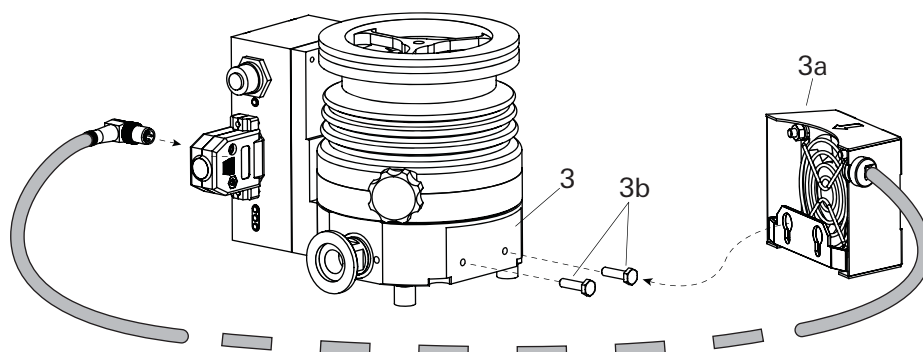


Fig. 1: Connecting the air cooling

- 3 Pump lower part
3a Air cooling unit
3b Hexagon screw

- ➔ Fix the air cooling unit to the holes of the turbopump using two screws.
- ➔ Plug in and fix the accessory's control lead to a free connection port on the connecting cable or adapter of the electronic drive unit.

→ Make the settings and control via the interfaces of the electronic drive unit.

3.2 HiPace 60 P, HiPace 80, SplitFlow 50

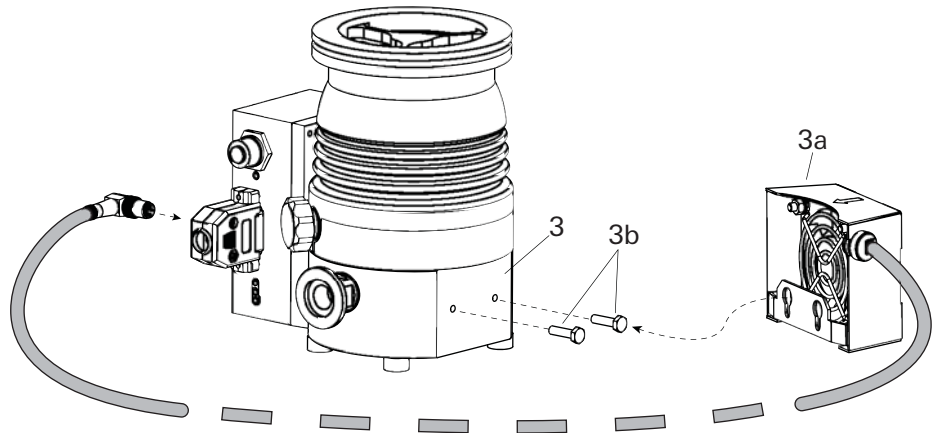


Fig. 2: Connecting the air cooling

- | | | | |
|----|------------------|----|---------------|
| 3 | Pump lower part | 3b | Hexagon screw |
| 3a | Air cooling unit | | |

- Fix the air cooling unit to the holes of the turbopump using two screws.
- Plug in and fix the accessory's control lead to a free connection port on the connecting cable or adapter of the electronic drive unit.
- Make the settings and control via the interfaces of the electronic drive unit.

3.3 HiPace 300, TC 110/TC 120

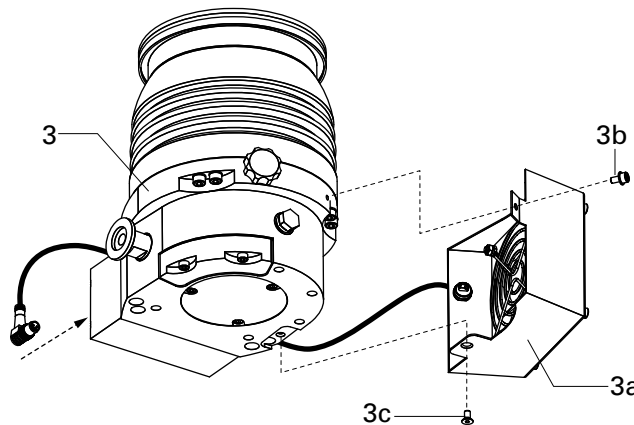


Fig. 3: Connecting the air cooling

- | | | | |
|----|------------------|----|--------------------|
| 3 | Pump lower part | 3b | Allen head screw |
| 3a | Air cooling unit | 3c | Counter-sunk screw |

- Fix the air cooling unit to the holes of the turbopump using two screws.
- Plug in and fix the accessory's control lead to a free connection port on the connecting cable or adapter of the electronic drive unit.
- Make the settings and control via the interfaces of the electronic drive unit.

3.4 HiPace 300, TC 400

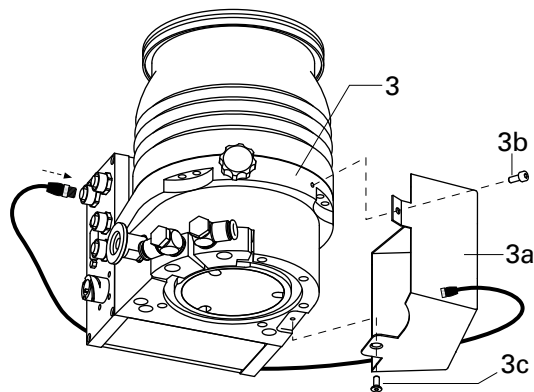


Fig. 4: Connecting the air cooling

3	Pump lower part	3b	Allen head screw
3a	Air cooling unit	3c	Counter-sunk screw

- Fix the air cooling unit to the holes of the turbopump using two screws.
- Plug in and fix the accessory's control lead to the corresponding accessory connection port on the electronic drive unit.
- Make the settings and control via the interfaces of the electronic drive unit.

3.5 HiPace 400, HiPace 700, HiPace 800

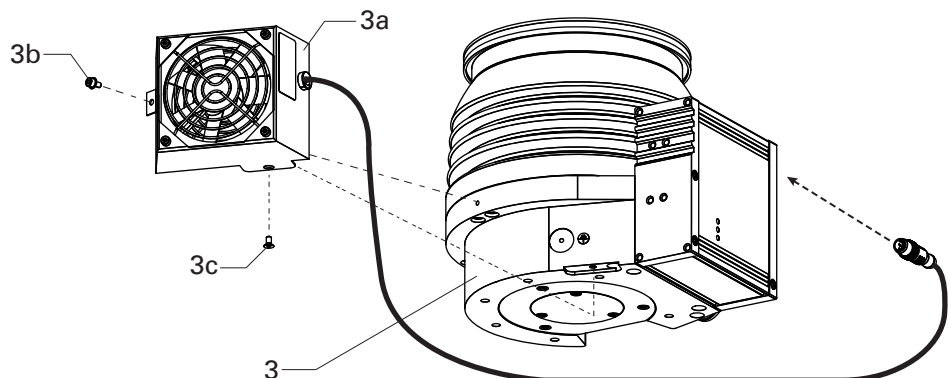


Fig. 5: Connecting the air cooling

3	Pump lower part	3b	Allen head screw
3a	Air cooling unit	3c	Counter-sunk screw

- Fix the air cooling unit to the holes of the turbopump using two screws.
- Plug in and fix the accessory's control lead to the corresponding accessory connection port on the electronic drive unit.
- Make the settings and control via the interfaces of the electronic drive unit.

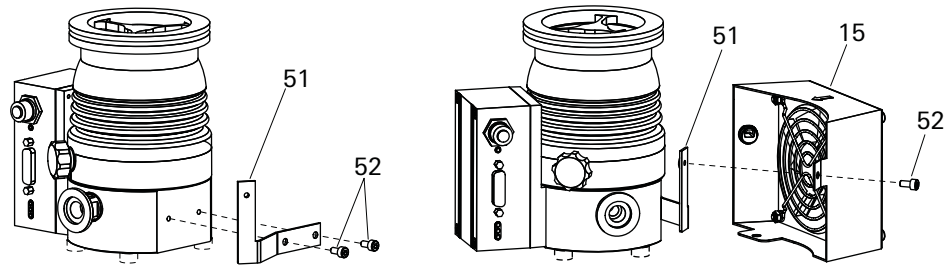
4 Air cooling units, 115 / 230 V DC

4.1 HiPace 60 P, HiPace 80, SplitFlow 50

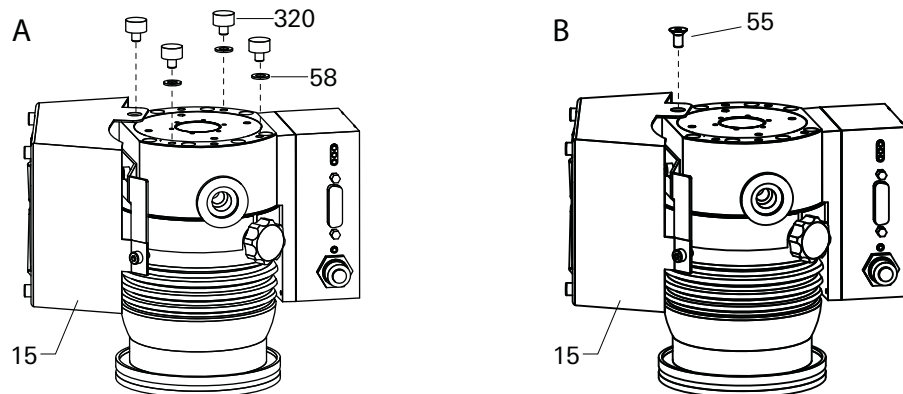
Scope of delivery

- Air cooling unit
- Mounting bracket
- 3 pieces Allen head screw M4x8
- 1 piece countersink screw M5x10
- 3 pieces washer

	PM Z01 343 A	PM Z01 344 A
Mains connection: voltage	230 V AC	115 V AC
Power consumption at 50 Hz	13 W	12 W
Power consumption at 60 Hz	10 W	9 W
Electric connection	field attachable	



- Fix mounting bracket 51 with two Allen head screws 52 at the pump bottom part.
- Fix fan housing 15 with Allen head screw 52 at mounting bracket.



- Fix fan housing at the pump. Depending on the use of rubber feet:
 - A: Fixing with one rubber foot 320. Thereby compensate the remaining three rubber feet 320 with a washer 58 each.
 - B: Fixing with countersink screw 55 without use of rubber feet.

4.2 HiPace 300, 400, 700, 800

- The installation of the air cooling unit 115/230 V DC to the turbopump is analogous to the 24 V DC version of the same pump type.

	PM Z01 308 A	PM Z01 309 A	PM Z01 341 A	PM Z01 342 A
Netzanschluss	115 V AC	230 V AC	230 V AC	115 V AC
Power consumption at 50 Hz	12 W	13 W	13 W	12 W
Power consumption at 60 Hz	9 W	10 W	10 W	9 W
Electric connection	field attachable			

4.3 Electrical connection



DANGER

Voltage-bearing elements

Danger to life from electric shock as a result of improper installation.

- Electrical connection may be carried out only by trained and authorised electricians.
- Ensure the system is adequately earthed.
- Establish an adequate fuse protection on customer side (depending on the model).



WARNING

Danger of unsafe electrical installation

Safe operation after installation is the responsibility of the operator.

- Do not independently modify or change the pump and electrical equipment.
- Make sure that the system is integrated in an emergency off safety circuit.
- Consult Pfeiffer Vacuum for special requirements.

5 Air cooling units, 24 V DC for TeleTC cable 400

Scope of delivery

- Air cooling unit
- 1 piece hexagon nut M4
- 1 piece spring-ring

Standard:	PM Z01 304 A
Shielded variants:	PM Z01 364 A
Control voltage	24 V DC
Power consumption	1.32 W
Electric connection	M12

The electronic drive unit must be cooled additionally, when the respective ambient temperatures are attained.

- For connection and operation of the accessory please refer to the operating instructions for the Tele TC cable 400 (PT 0310 BN).

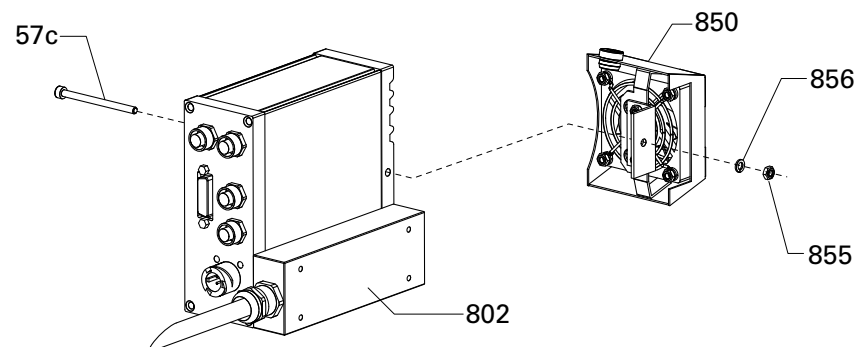


Fig. 6: Mounting an air cooling unit to the electronic drive unit

57c Allen head screw	850 Air cooling unit	856 Spring washer
802 Adapter, TC side	855 Hexagon nut	

- Fix the air cooling to the free borehole of the electronic drive unit, using the installation material (enclosure) and the remaining third allen head screw (57c).
- Plug in and fix the accessory's control lead to the corresponding accessory connection port on the electronic drive unit.

6 Dimensions

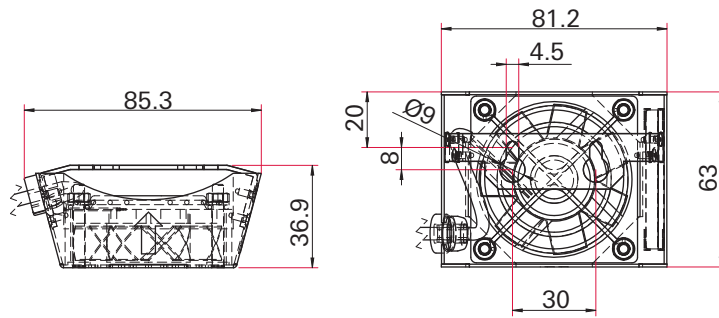


Fig. 7: PM Z01 300 A, PM Z01 348 A, PM Z01 360 A

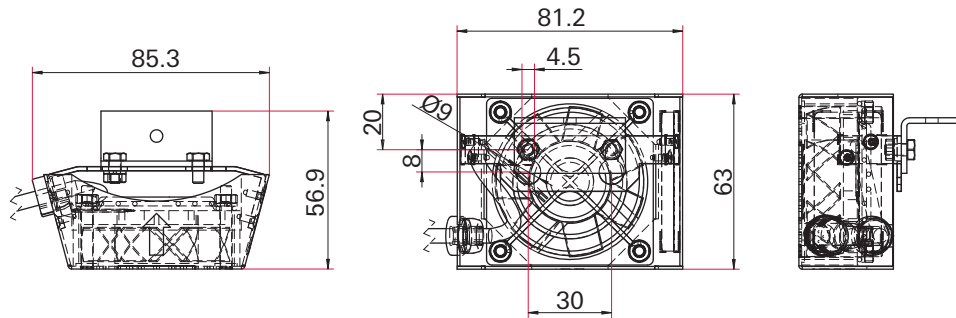


Fig. 8: PM Z01 304 A, PM Z01 364 A

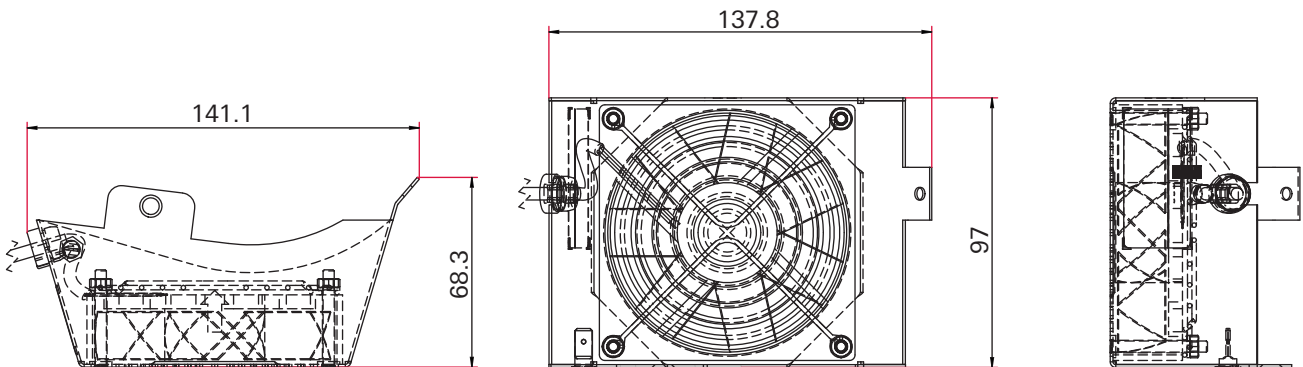


Fig. 9: PM Z01 301 A, PM Z01 302 A, PM Z01 308 A, PM Z01 309 A, PM Z01 343 A, PM Z01 344 A, PM Z01 361 A, PM Z01 362 A

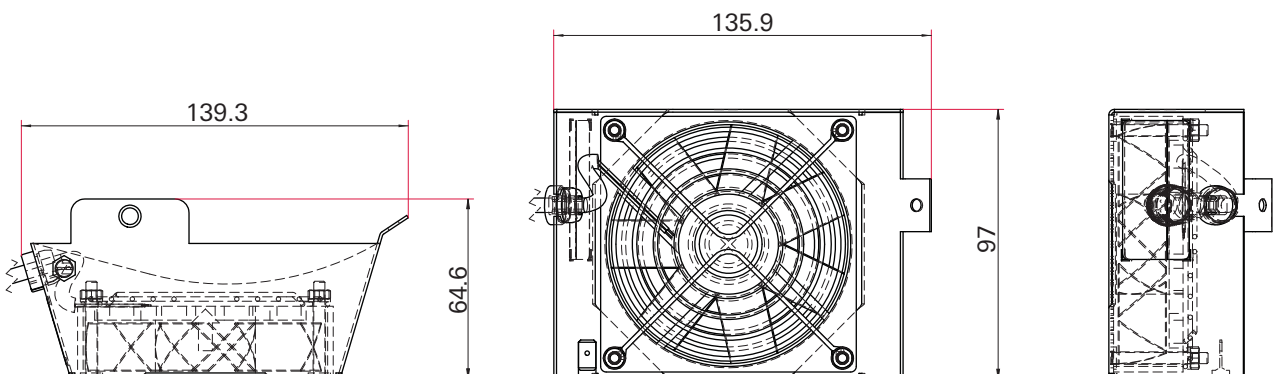


Fig. 10: PM Z01 303 A, PM Z01 363 A, PM Z01 341 A, PM Z01 342 A



Declaration of conformity

We hereby declare that the product cited below satisfies all relevant provisions according to the following **EC directives**:

- **Electromagnetic Compatibility 2014/30/EU**
- **Low Voltage 2014/35/EU**
- **Restriction of the use of certain Hazardous Substances 2011/65/EU**

Air Cooling Unit

Harmonised standards and national standards and specifications which have been applied:

DIN EN 61010

Signature:

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35614 Asslar
Germany

(Dr. Ulrich von Hülsen)
Managing Director

2016-05-04

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:

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