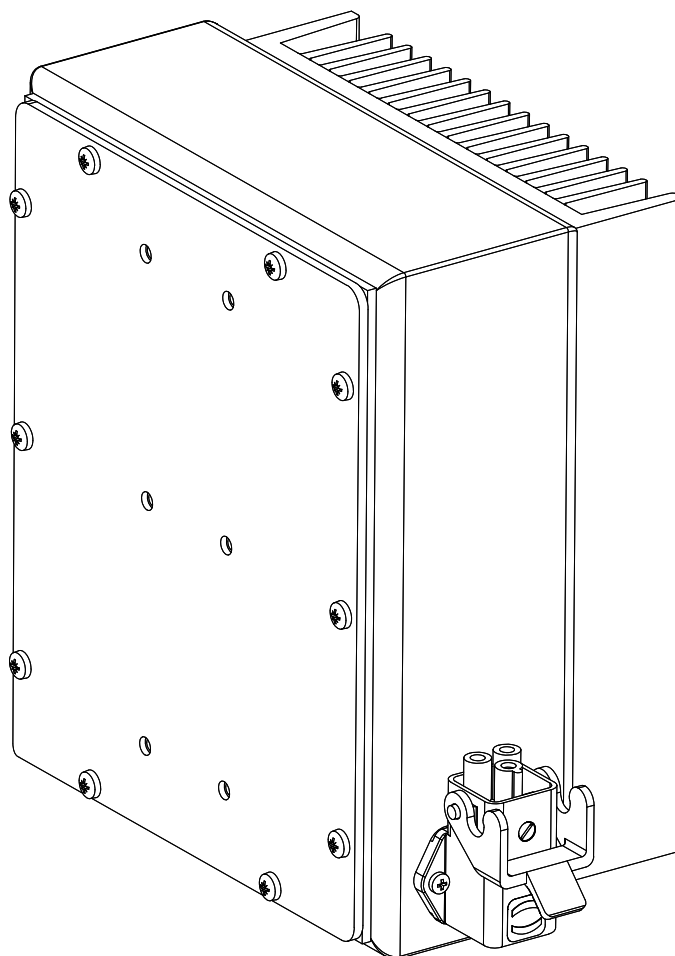


TURBO.POWER 800

Power supply

Operating instructions 300903162_002



Part No. 800100V0010

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We accept no liability for loss of profit, loss of market or any other indirect or consequential loss whatsoever.

Product warranty and limit of liability are dealt with in our standard terms and conditions of sale or negotiated contract under which this document is supplied.

You must use this product as described in this manual. Read the manual before you install, operate, or maintain the product.

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Important safety information

1 Important safety information



CAUTION: SAFETY INFORMATION

Refer to the individual pump operating instructions for applicable safety information.

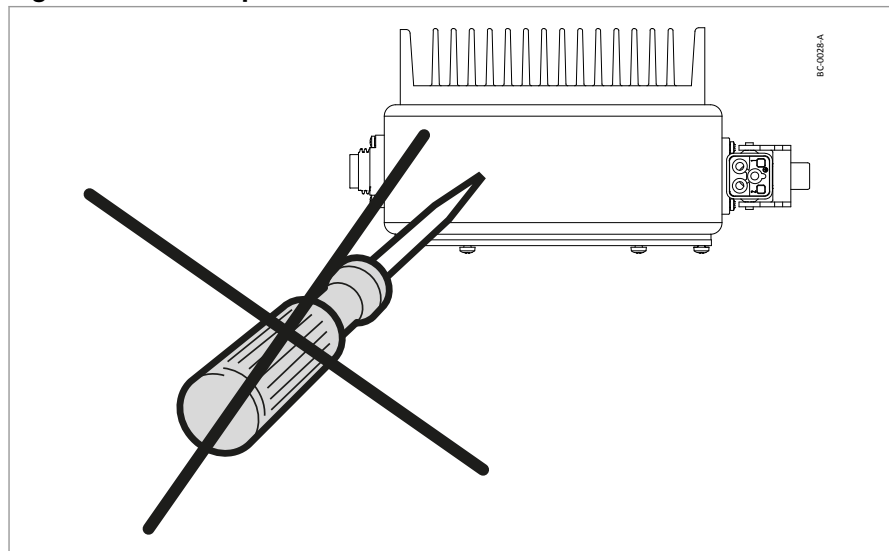


CAUTION: DANGEROUS VOLTAGE

Risk of electric shock and damage to the equipment. Make sure that the mains power supply is switched off before you connect or disconnect the mains cable.

The TURBO.POWER 800 must only be opened by certified Leybold Service Centres. Opening by unauthorised personnel voids warranty.

Figure 1. Do not open



Description

2 Description

The TURBO.POWER 800 is a power supply unit for powering the TURBOVAC 850 i(X) - 1450 i(X) turbomolecular pumps. It is for indoor use only.

The mains input is protected by a fuse.

The TURBO.POWER 800 can be fitted to the pump or used as a benchtop unit.

2.1 Supplied equipment

- TURBO.POWER 800
- 4 feet (to be assembled for use as a benchtop unit)

2.2 Accessories

Cable TURBOVAC 850 i(X) - 1450 i(X) - TURBO.POWER 800	
3 m	800096V0303
5 m	800096V0503
Mains cable for TURBO.POWER 800, 2.5 m long	
with Euro plug	411310V03
with US plug 6-15 P	411320V03
with US plug 5-15 P	411340V03
with UK plug	411330V03
Mains input socket (only)	411300V03
Bracket for mounting to the pump (washers and bolts enclosed)	800100V0110

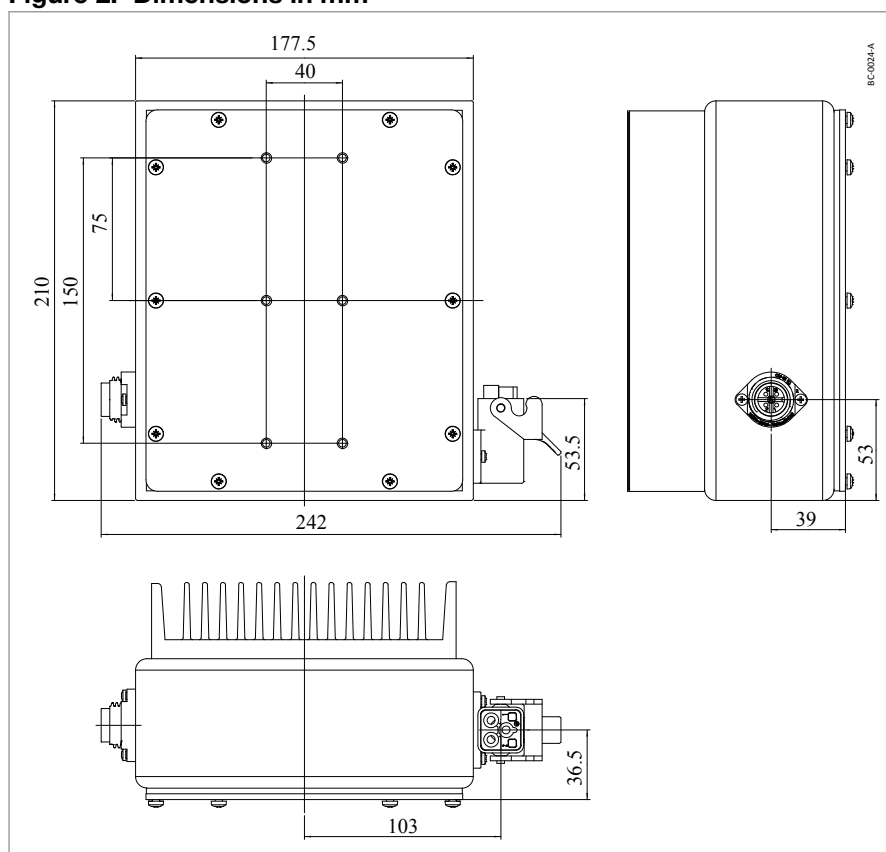
2.3 Technical data

Input	
Mains voltage	100 - 240 V a.c. \pm 10%, 50/60 Hz
Maximum power consumption	1100 VA
Efficiency	84 %
Leakage current	2 mA / 230 V a.c.
AC fusing	15 A slow-blow
Output	
Nominal DC output voltage	48 V \pm 5% /-10%
Maximum DC continuous current	10.65 A
DC peak current (30 min) (limited by pump, controlled by power supply)	17.1 A
Maximum rated power output	800 W
Other data	
Weight	4.9 kg
Protection type EN 60529 UL50 E	IP 54 Type 1
Ambient temperature during operation in storage	5 – 40 °C -15 – +70 °C

Description

Relative air humidity	5 to 85 % non condensing
Overvoltage category	II
Contamination grade	2
Resistance to interference	61000-6-2 Industry
Interference sourcing	61000-6-3 Household
Maximum operating altitude	2000 m above sea level without any power derating >2000 m up to 3000 m with a derating of 1%/100 m

Figure 2. Dimensions in mm

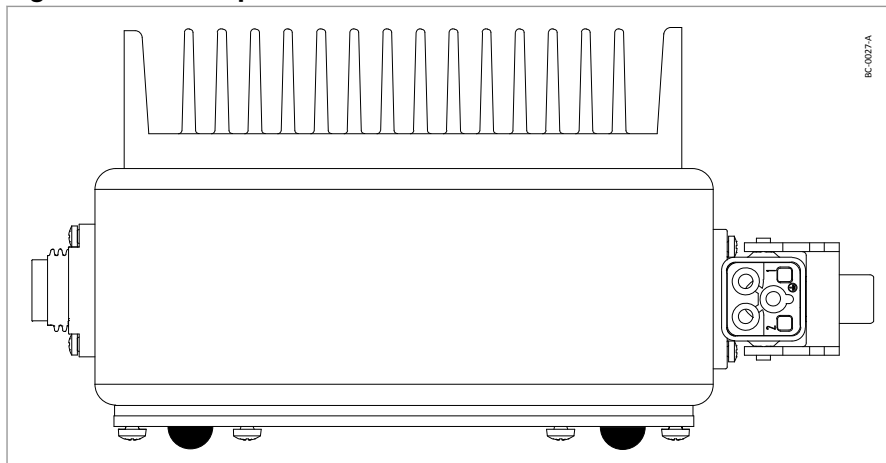


3 Installation

Refer to the individual pump operating instructions for installation information.

3.1 Use as a benchtop unit

Figure 3. Benchtop unit



Fix the supplied adhesive feet to the power supply unit and place the unit on an even, level surface.

3.2 Installation to the pump

1. Attach the bracket to the power supply unit using 6x M4x14 bolts, washers and spring washers. Tighten with a torque of 3 Nm. Refer to [Figure: Mount the bracket to the power supply](#).
2. Attach the bracket with the power supply unit to the pump. Refer to [Figure: Mount the bracket to the pump](#).
 - If there is no air cooler, attach the bracket using 4x M5x14 bolts, washers and spring washers and tighten with a torque of 5 Nm.
 - If the air cooler is mounted, attach the bracket using 4x M5x16 bolts, washers and spring washers and tighten with a torque of 5 Nm.
3. Insert the connecting cable between the pump and TURBO.POWER 800.
4. Tighten the cable through the plug at the connection end.

The unit is not equipped with a mains switch. It will power up after the mains cable is connected.

Installation

Figure 4. Mount the bracket to the power supply

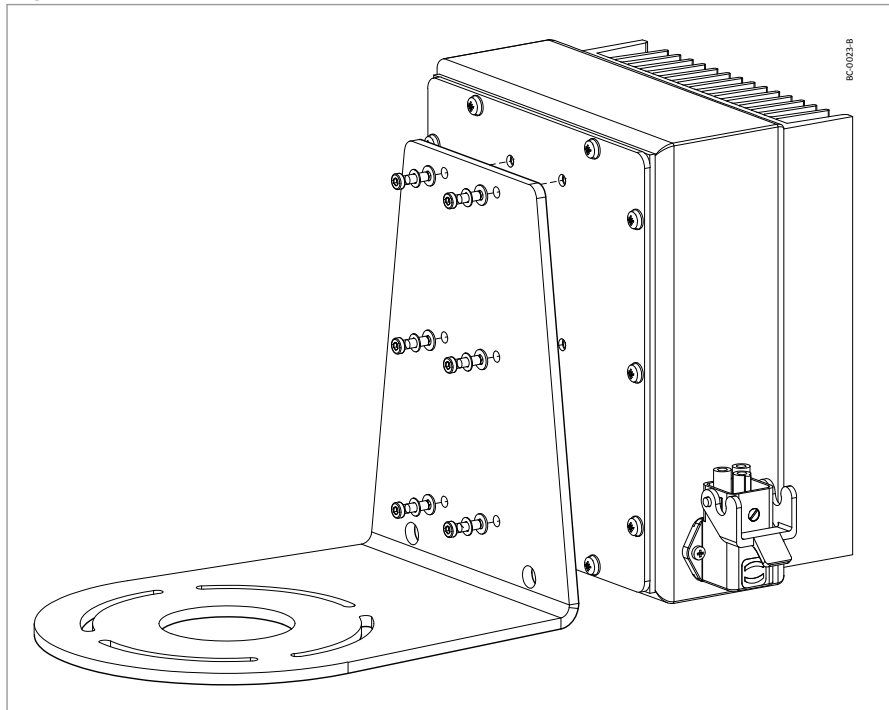
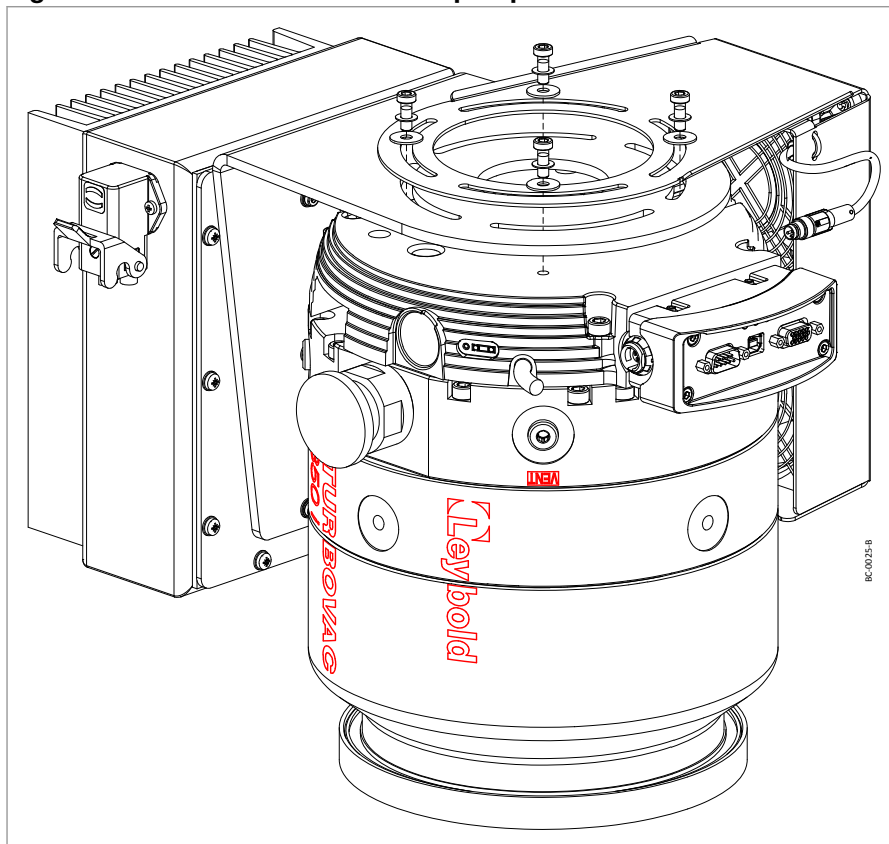


Figure 5. Mount the bracket to the pump



4 Operation



CAUTION: DANGEROUS VOLTAGE

Risk of electric shock and damage to the equipment. The turbomolecular pump and the TURBO.POWER 800 must only be operated if installed in compliance with the information provided in the Operating Instructions.

The disconnecting device must be easily accessible.

4.1 Start up



CAUTION: DANGEROUS VOLTAGE

Risk of electric shock and damage to the equipment. Make sure that the mains power supply is switched off before you connect or disconnect the mains cable.

The mains power supply must have a suitable earth connection.

To start the TURBO.POWER 800 do the steps that follow:

1. Plug in the mains cable.
2. Secure the mains cable so that it cannot be pulled out inadvertently.

To test the connection, switch the turbomolecular pump on and off. Refer to the applicable turbomolecular pump operating instructions for information.

The turbomolecular pump will start only when the mains cable is plugged and a start command is provided.

4.2 Shut down

To shut down the TURBO.POWER 800 do the steps that follow:

1. Switch off the turbomolecular pump.
2. Wait for the rotor of the pump to stop. The Green status LED will stop flashing to confirm that the rotor is ideal.

Note:

The rotor can take several minutes to stop. With the DC power supply off, the turbomolecular pump will act as a generator supplying the frequency converter with energy as indicated by the yellow power LED.

3. Disconnect the mains plug from the power supply.

In case of an emergency shutdown, disconnect the mains plug.

4.3 Maintenance

The TURBO.POWER 800 is maintenance free. Repairs must only be done by Leybold.

You must disconnect the mains plug from power supply and make sure that the system is protected against automatic restart during any repair work.

Certificates

5 Certificates

The TURBO.POWER 800 have been successfully tested by the TÜV Rheinland of North America according to the requirements of

- UL 61010-1:2012
CSA C22.2 No. 61010-1-12

cTUVus Certificate No. CU72204400.01

cTUVus File No. 32084633.001

The TÜV Rheinland of North America is a “Nationally Recognized Testing Laboratory” (NRTL) for the USA and Canada.



EU Declaration of Conformity

The manufacturer: Leybold GmbH
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Germany

herewith declares that the products specified and listed below which we have placed on the market, comply with the applicable EU Directives. This declaration becomes invalid if modifications are made to the product without agreement of Leybold GmbH.

Product designation: Power supply for Turbomolecular Pumps
Type designation: TURBO.POWER 800
Part numbers: 800100V0010

The products comply with the following Directives:

Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility (2014/30/EU)
Directive RoHS (2011/65/EU) & (2015/863/EU)

The following harmonized standards have been applied:

EN 61010-1:2010/A1:2019 Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 1: General requirements

EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use — EMC requirements — Part 1: General requirements
Emissions: Group 1, Class B
Immunity: Industrial electromagnetic environment

EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances


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