Genevac

EZ-2 Elite
Personal Evaporator

Key Features

- Compact design with built in condenser trap.
- Auto draining condenser collects all solvents as liquid, even water.
- Automated operation: simply load, select a method, press start and walk-away.

Specifications

Evaporator	
Max rotor speed	2150 rpm
Max load per swing	1.5 kg
Max operational imbalance	40 g
Dimensions (w x d x h)	570 x 645 x 700 mm
Approx weight (varies with build options)	80 kg

Vacuum pump (remote)	
Type	Oil-free scroll
Ultimate system vacuum	< 0.5 mbar
Dimensions (w x d x h)	432 x 282 x 302 mm
Weight	26.2 kg

Condenser (integral)	
Type	Single stage vapour compression
Refrigerant gas	R404A
Refrigerant charge	0.070 kg
CO2e	0.27454 tonnes
Lowest possible temperature	-50°C
Nominal operating temperature	-35°C

Storage / transportation environment	
Ambient temperature	0°C to 40°C (-10°C permissibe during transportation)
Relative humidity	10% to 80% non-condensing
Store upright	

Operational environment	
Ambient temperature	15°C to 30°C
Relative humidity	10% to 80% non-condensing
Altitude	Sea level to 1600 m
Ventilation air-gap	50 mm
Ingress protection rating	IP30

The evaporator is designed for use in a pollution degree 2 environment (normally only non-conductive pollution occurs).

Inert gas supply requirements (IGP option)	
Max pressure	2 bar g (3 bar absolute)
Min pressure	1.5 bar g (2.5 bar absolute)
Flow rate (nominal)	50 litres / min @ STP
Consumption during purge cycle	250 litres
Consumption rate - blanket	110 litres / hour
Hose length	2.5 m
Connector type	$^{3}/_{8}$" BSP female

Dry nitrogen or argon are suitable for use with the inert gas purge system. Consult your Genevac representative for advice before using an alternative inert gas.

Emissions

Typical noise level is 69 dB (A) at one metre from the evaporator during normal operation.

For the purpose of air conditioning requirement calculations, all power consumed by the system is dissipated as heat.

PTFE hose (6 mm ID, 8 mm OD) is supplied to connect the exhaust to a fume extraction system.

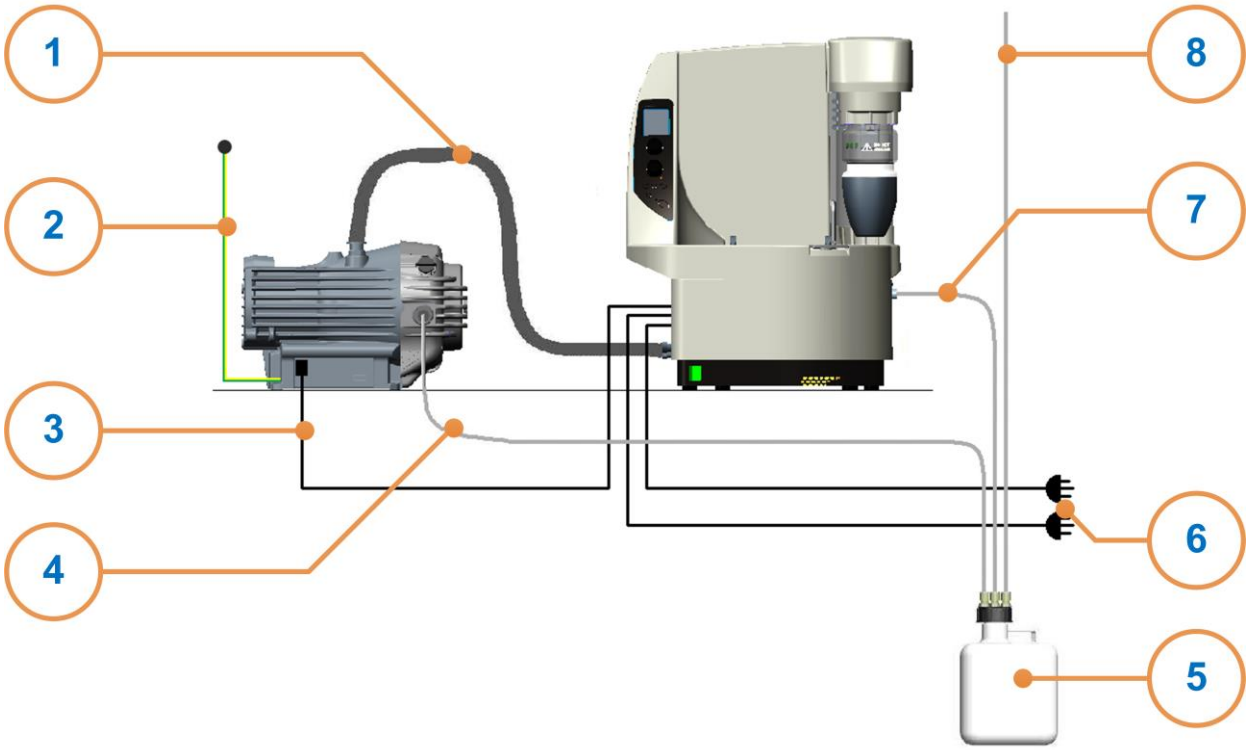
Electrical Supply	Peak running power VA (W)	Peak current (A) @ unit voltage	Connector
100 V 50 Hz	1200	12	1 (Side)
	510	5.1	2 (Rear)
100 V 60 Hz	1200	12	1 (Side)
	480	4.8	2 (Rear)
120 V 60 Hz	1800	15 (typically 10)	1 (Side)
	600	5	2 (Rear)
230 V 50 Hz	1610	7	1 (Side)
	530	2.5	2 (Rear)

The system must be connected directly to mains power supply outlets by two separate mains power cables. The earth cable provided must be connected between the vacuum pump and an available earthing point. There should be an electrical connection to earth via each power cable and extensions leads should not be used. Power cables supplied are 2 m in length and appropriate to the region to which the unit is delivered, refer to the sales order for exact specification. To prevent nuisance tripping, the mains power supplies to the evaporator should be fitted with suitably rated type “D” mains circuit breakers. If using an earth leakage device (e.g. an RCD or GFI) use at least a 30 mA rated unit to avoid trips at start-up.

Overview

Dimensions (mm)

Electrical cables and hose connections



Item	
1	Vacuum Hose
2	Permanent Electrical Earth Connection
3	Pump Control Cable
4	Pump Exhaust Hose
5	Waste Solvent Container
6	2 x Power Cables
7	Waste Solvent Drain Hose
8	Exhaust Hose (mandatory Fume Extraction connection)

Dimensions with optional Infinity Trolley (optional)

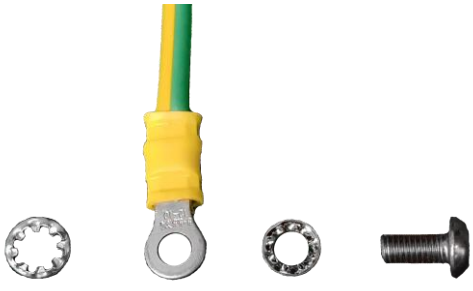
The lower part of the trolley can be partly extended (to 933 mm) to allow access to items on the lower shelf, or fully extended for improved stability when moving.

Note: Optional equipment shelf adds 260 mm to width.

Electrical Earth Connection

All EZ-2 Elite evaporators must be permanently connected to electrical earth during operation. **A suitable permanent earthing point at the installation site is required.**

A 3 metre yellow and green earth cable is provided. Connect one end of the earth cable to the earthing point on the vacuum pump, as shown:



Connect the other end of the earth cable to the permanent earth point at the installation site using a secure fixing mechanism (e.g. nut & bolt) to ensure that the earth cable cannot be accidentally disconnected.

WARNING: High Leakage Current. The earth cable must always be connected before the power cable. The earth cable should never be disconnected while the evaporator is connected to mains power.

Installation Requirements

Please read the following installation requirements carefully. If the specification for your EZ-2 Elite includes the inert gas purge option, or if installation and commissioning by a Genevac approved Service Engineer has been specified, to arrange a Service Engineer visit, please complete the attached ***Pre-Installation Acknowledgement / Acceptance Form*** and return it to Genevac. Please note that failure to satisfy all requirements may result in the engineer being unable to complete the commissioning process.

Location

A risk assessment should be carried out when selecting a suitable installation site. The evaporation system should be sited on a suitable work-surface that is flat, level, resistant to chemical spillage, and secured to prevent movement or vibration.

There must be enough space to position the evaporator away from the edge of the bench and any breakable objects or areas where entrapment could occur. There must be provision for:

- A 50 mm air gap between the evaporator cooling vents and any other object;
- Connection to an appropriate laboratory fume-extraction system;
- Connection to two seperate mains power outlets and protective earthing point;
- Access for maintenance and general operational requirements.

Infinity Trolley (optional)

Infinity Trolley is a modular system that is designed to accommodate a range of Genevac evaporation systems. The trolley provides a safe and durable support for the evaporator whilst occupying the minimum amount of space in the laboratory.

Vacuum pump

Vacuum hoses and electrical cables are supplied for connecting the vacuum pump to the evaporator. The vacuum pump may be positioned beside the evaporator or on the floor or shelf below.

If required, a 35 mm hole can be drilled through the bench to accommodate the cable and hose to the vacuum pump.

Waste solvent

A waste solvent container and connecting hose must be connected to the condenser drain outlet. For systems with an auto drain condenser, this must provide unimpeded drainage at all times while the system is operating. The waste solvent container should be positioned below the level of the waste solvent drain outlet (normally on the floor in front of the evaporation system) or on a shelf below. It should be easily accessible for emptying.

Exhaust fumes

PTFE hose is supplied to connect the evaporator exhaust to a suitable laboratory fume extraction system. Where multiple systems are installed, exhaust lines should be connected to the extraction system independently (not “T-connected” to a shared line).

Commissioning systems with IGP

Inert Gas Purge is a build option for EZ-2 Elite. For evaporators fitted with this option, installation and commissioning must be carried out by a suitably trained Genevac representative. IGP systems must be installed in a ventilated environment. Genevac recommend installing evaporators with inert gas purge in a fume cupboard.

For connection to a pressure regulated inert-gas supply, systems are supplied with a hose which has 3/8” BSP (female) connector. An adapter may be required to make the connection; due to the variety of connector types available, Genevac do not supply an adapter.

If an adapter is required, it must be fitted to the inert-gas supply outlet before the evaporator can be commissioned. Without an adapter, the inert-gas purge system will be inoperable and the installation engineer will be unable to validate the inert-gas purge function.

Page 5 of this document ia a ***Pre-installation Achnowledgement / Acceptance*** Form which should be detached and returned to Genevac.

Pre-Installation Acknowledgement / Acceptance Form

To arrange the installation of your new equipment by a Genevac Engineer, please complete this sheet and return to:

UK & Europe

Genevac Ltd
The Sovereign Centre
Farthing Road
Ipswich
IP1 5AP
United Kingdom

Fax: **+44 (0) 1473 461176**
Email: **service@genevac.com**
Phone: **+44 (0) 1473 243000**

USA

Genevac Inc
SP Industries
3538 Main Street
Stone Ridge
NY12484
United States of America

Fax: **(1) 845 267 2212**
Email: **sales@genevacUSA.com**
Phone: **(1) 845 267 2211**

Tick to confirm

Confirm receipt of the ***Pre-installation Requirements*** document.	
Confirm the proposed installation location is suitable for the weights / dimensions specified.	
Confirm access is available to installation area.	
Confirm there is access to two electrical power supply outlets with appropriate sockets.	
For systems with inert gas purge: confirm there is access to an inert gas supply as specified	
For systems with inert gas purge: confirm an inert gas adapter is available	
Specify the number of personnel to attend training.	
Confirm all personnel shall be available for training on day of installation.	
EZ-2 Elite serial number (if known).	
Sales order number.	

Do you have any comments or concerns that may affect the installation?

Please advise us if any special consideration is required for delivery; for example: “no unloading facility".
If you have any questions, please contact the Genevac Service Department using the contact details above.

Please note: failure to satisy all of these requirements may result in a chargeable return visit.

Customer Name:		Company:	
Customer Signature:		Date:	