



**EZ-2 personal solvent evaporator**



- *All-in-one compact design saves valuable bench space*
- *Easier to use than a rotary evaporator*
- *Smart evaporation software gives great results every time*
- *Advanced technology offers total sample protection*
- *Versatile design accommodates a wide choice of sample holders*
- *Easy maintenance contributes to low cost of ownership*

## Everything a modern evaporator should be – and more

The EZ-2 Series is the culmination of an extensive research and development programme that draws on the expertise of Genevac's engineers and the experiences of many scientists in the laboratory. Using the most advanced proven technology in evaporation science, the EZ-2 Series has been designed specifically for solvent removal in life science research, be that concentration of samples or complete drying. Genevac's fifteen years of experience in vacuum engineering has resulted in the creation of a compact sample concentrator combining great performance, ease of use greater than a rotary evaporator and compatibility with all commonly used solvents and acids.

The innovative design of the EZ-2 presents real advantages within parallel synthesis and medicinal chemistry, as well as for general-purpose solvent removal needs in life science laboratories. At the heart of the evaporator are a robust, solvent resistant, oil free pump from ILMVAC, and the high efficiency, defrost free, SpeedTrap, designed by Genevac engineers, which traps all solvents as liquids, even water.

To enable all users to achieve excellent results every time, the EZ-2 has been made easier to use than a conventional rotary evaporator. In addition to accommodating many more samples, the EZ-2 can operate unmanned, without requiring continuous attention to prevent bumping, or to tweak vacuum levels. Simply set the temperature, select the solvent type, and press *Start*. The EZ-2 does the rest for you; controlling the vacuum conditions and gradient, while

controlling the heater lamp and automatically stopping the run once the samples are dry.

Genevac's patented Dri-Pure™ sample protection system, which prevents cross-contamination and sample loss due to bumping, is provided as standard on the EZ-2. For extra peace of mind with thermally sensitive samples, the EZ-2 temperature control and Auto Stop systems constantly protect your samples during operation. This gives every user true walk-away, unmanned operation, simple enough to use without special training.

**EZ-2 is simply the most compact high performance sample concentrator available**





EZ-2

Operating the EZ-2 is as simple as 1, 2, 3. Load your samples and close the lid. Then:

1 Select sample protection temperature

2 Select solvent type

3 Press Start

... and walk away while the EZ-2 dries your samples safely, smoothly and securely.



EZ-2 Plus

There are two EZ-2 models, Standard and Plus. The Standard is suitable for water and volatile solvents, while the Plus is recommended for more difficult solvents with higher boiling points, as it is equipped with chamber heating and a more powerful pump. Either model can be specified with resistance to chlorinated acids (see right hand page), but retrospective upgrades for this or 'Plus' specification are not possible.

Using the EZ-2 could not be simpler. Following the three steps shown here enables a first time user to set a safe temperature, select the optimum evaporation programme – Dri-Pure™ activates automatically when required – and stop the system when the samples are dry. A concentration mode, where the user can set an evaporation time, is easily accessed.

The *Pause* button enables samples to be checked without disturbing the automatic sample-drying programme and the *Stop* button ends the run. For safety, the lid only opens when the rotor has stopped. Out-of-balance and thermal cut outs are standard.

### The revolutionary SpeedTrap

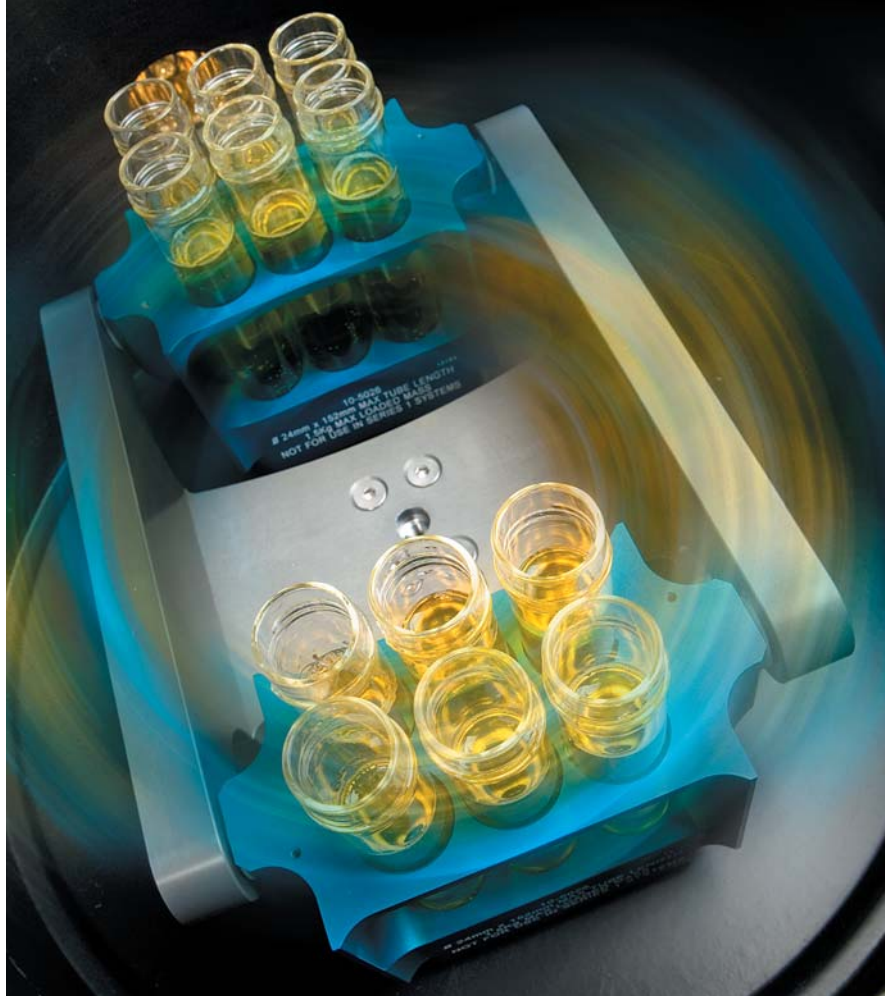
The EZ-2 is fitted as standard with an enhanced version of Genevac's revolutionary SpeedTrap. This novel, highly chemically resistant cold trap is designed to condense solvents, in order to protect the environment, and help to speed evaporation. The SpeedTrap runs at  $-50^{\circ}\text{C}$  to enable it to catch the most volatile solvents. However, it does not freeze the condensed solvent, even when working with water. Solvents collect in the insulated, plastic coated glass vessel, enabling the user to check the progress of evaporation and determine when the trap should be emptied. This process could not be easier, as the glass vessel is removed by a quarter turn, allowing the solvent to be poured directly into the waste container. Replace the vessel with a quarter turn, and the EZ-2 is ready to run again. No fuss, no long waits, no mess – just clean, simple and easy!



CONDENSER TRAP AND PUMP ARE BUILT-IN – YET THE EZ-2 STILL SAVES PRECIOUS BENCH SPACE







To achieve the fastest possible drying times, high power heat lamps with gold plated reflectors are used.



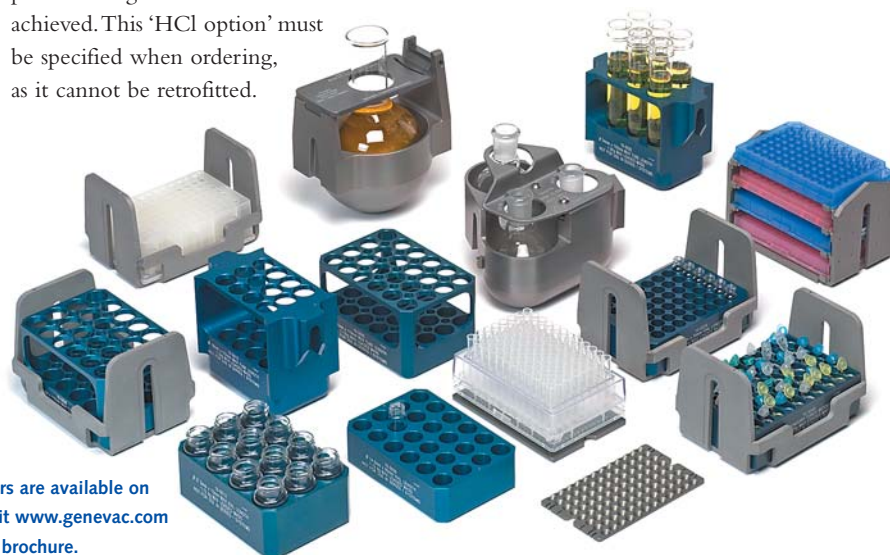
The ILMVAC vacuum pump is an oil free pump with PTFE diaphragms and fittings to resist attack by even the most aggressive solvents. ILMVAC pumps are designed for long life, quiet running and high performance. Should the pump ever need attention, it can be easily removed for inspection or replacement.

Making maximum use of the chamber dimensions, the strong H-shaped rotor in the EZ-2 allows up to 1.5kg to be loaded in each position. The EZ-2 has 40g imbalance tolerance and will stop the run automatically when this is exceeded. Loading is therefore straightforward, as balancing the volumes in each holder by eye is normally sufficient.

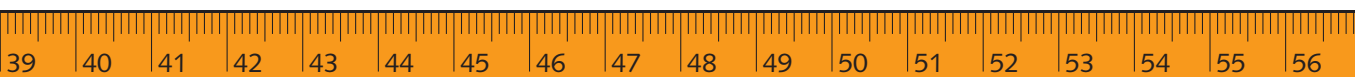
As well as being productive, the EZ-2 is also highly versatile. Its high capacity design accommodates a wide selection of sample holders, for example, round-bottom flasks up to 500ml, tubes up to 160mm long (including 24x150mm Carousel™ tubes), custom reaction blocks and, of course, shallow or deep-well microtitre plates.



To protect your investment further, there is an additional low-cost option available for the EZ-2 and EZ-2 Plus, that allows the routine use of hydrochloric acid and aggressive solvents. By building key elements in Hastelloy®, glass or PTFE, full protection against acid chlorides is achieved. This 'HCl option' must be specified when ordering, as it cannot be retrofitted.



Other sample holders are available on request – please visit [www.genevac.com](http://www.genevac.com) for a sample holder brochure.



Actual width of the EZ-2

Easier to use than a rotary evaporator, the EZ-2 thinks for you and provides full 'walk away' automation

Ultra-compact design, with all components integrated

High efficiency SpeedTrap which collects all solvents as a liquid – even water – so no defrosting is necessary

Dri-Pure™ protects against sample 'bumping' while the SampleShield system prevents overheating

Insulated and plastic coated solvent resistant glass collecting vessel allows condensed solvent levels to be easily seen

Built-in fume extraction path

Interlocked lid only opens when the rotor has stopped

Additional low-cost Hastelloy® option available for use with hydrochloric acid

High efficiency solvent resistant ILMVAC diaphragm pump

Out-of-balance and thermal cut-outs as standard

Easy access for routine maintenance

Quiet operation from precision direct drive motor

Compatible with almost all commonly used solvents and acids, including TFA

High capacity H-shaped rotor design takes flasks, tubes, vials, reaction blocks and microtitre plates

Polycarbonate reinforced glass window in lid



**Mechanical Data**

|                              |        |
|------------------------------|--------|
| Max RPM                      | 2000   |
| Max G                        | 500    |
| Drive system                 | Direct |
| Sample load including swings | 1.5 kg |
| Max. imbalance               | 40 g   |
| IR lamps (number)            | 1      |

**Vacuum System**

|                          |  |
|--------------------------|--|
| Pressure display         | 0-1200 mbar                              |
| Pressure control         | automatic, 10 mbar (2 mbar) - atmosphere |
| Bump protection          | Yes                                      |
| System ultimate pressure | 10 mbar (2 mbar)                         |
| Auto vacuum vent valve   | Yes                                      |

**Temperature controls**

|                              |                                     |
|------------------------------|-------------------------------------|
| Temperature control range    | Ambient to 80°C                     |
| Temperature control accuracy | +/- 2.5°C                           |
| Temperature sensing          | by SampleShield infra red pyrometer |
| Temperature display range    | 0° to + 80°C                        |
| Chamber temp. range          | Ambient (Ambient to 60°C)           |
| End of run determination     | Automatic                           |

**Condenser Data**

|                               |                                     |
|-------------------------------|-------------------------------------|
| Condenser temperature         | -50°C                               |
| Condenser power               | 70 Watts max load                   |
| Useable capacity - vacuum pot | 1 litre                             |
| Materials - condenser pots    | Vacuum insulated Borosilicate glass |
| Condenser coils               | FEP coated                          |

**Solvent compatibility:**

|   |                              |
|---|------------------------------|
| Boiling points  | Up to 120°C (165°C)          |
| Including: alcohols, DCM/methylene chloride, ethyl acetate, water, TFA, |                              |
| DMF   | Only with EZ-2 plus          |
| HCl   | Only with HCl option         |
| Diethyl ether   | Only with inert purge option |

**Dimensions**

|        |                                      |
|--------|--------------------------------------|
| Width  | (max) 597mm (570mm without catchpot) |
| Depth  | (max) 645 mm                         |
| Height | (max) 700mm                          |
| Weight | 82 kg (88 kg)                        |

**Services**

|              |                                       |
|--------------|---------------------------------------|
| Power supply | 120V (±10%), 60 Hz, 15A (USA)         |
|              | 230V (±10%), 50 Hz, 13A (UK + Europe) |
|              | 100V (±10%), 50 Hz, 15A (Japan)       |
|              | 100V (±10%), 60 Hz, 15A (Japan)       |

**Safety**

Conforms to EN 61010-2-020:1995 for centrifuge safety. UL certification applied for.

(EZ-2 Plus specification shown in brackets.)



EZ-2 accepts a wide range of formats, including flasks, vials, tubes and microtitre plates.



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Genevac technology is protected by patents and patent applications in the UK, USA and worldwide.

Genevac has a continuous development programme aimed at further improving its products and all specifications are, therefore, subject to change.

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