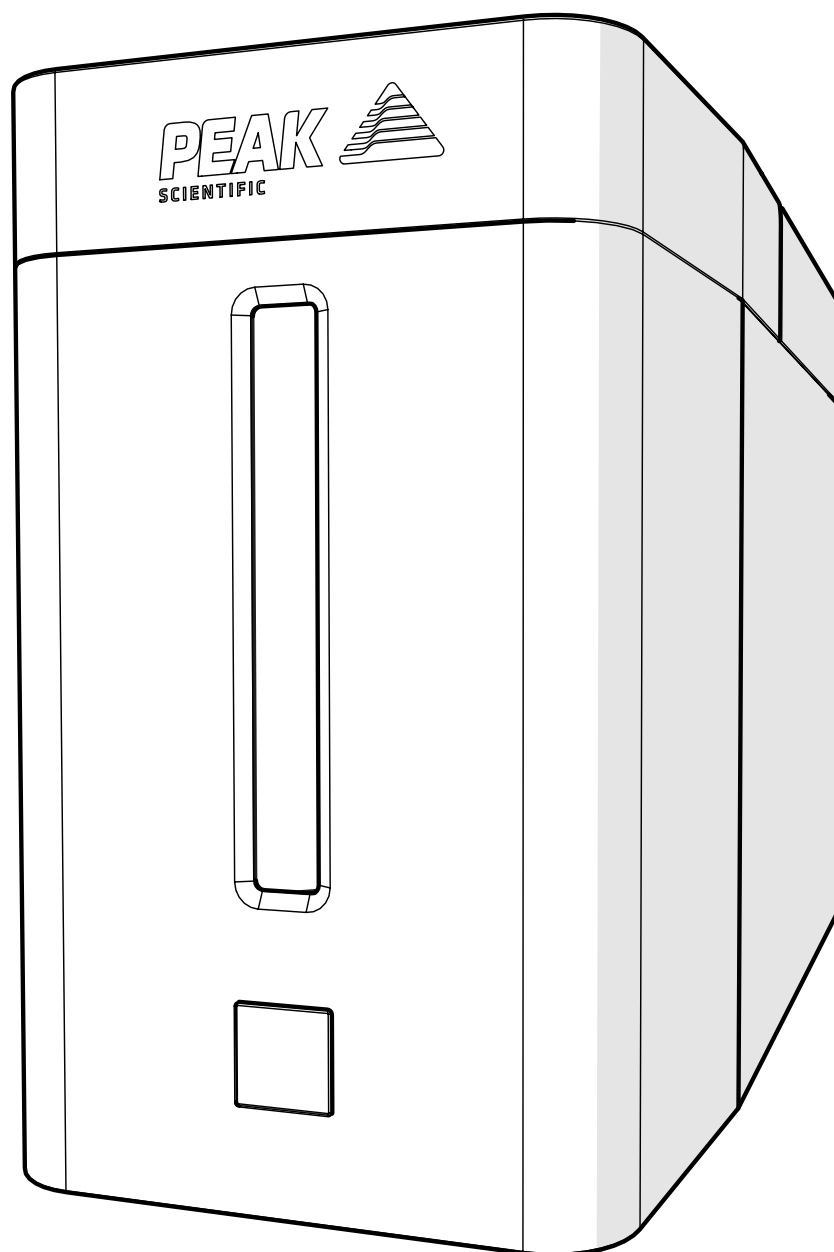


Precision Hydrogen SL (All Models)

Installation Guide



Change History

Rev	Comment	Name	Date
1	Initial Release	L. Couttie	09/04/2020
2	Product Updates	L. Couttie	20/01/2021
3	Product Updates	L. Couttie	10/03/2021
4	Dryer Cap Removal Tool Added	L. Couttie	05/05/2022
5	Part Number Update	D.Lai	18/08/2022
6	Fittings Kit Update	L. Couttie	19/01/2023
8	Filter Update/removal	D.Lai	19/10/2023
8	general update	D.Lai	19/10/2023
10	Dessicant Capsule Update	C. Denholm	03/09/2024
11	Product Name update	D.Lai	02/12/2024

How to use this Manual

This installation guide is intended to be used as a step by step, quick start guide, to facilitate installation and configuration.

Please visit www.peakscientific.com/downloads to download the full User Manual for your gas generator.

We recommend that you read and understand the full user manual prior to following the instructions in this installation guide.




Thank you for selecting Peak Scientific to meet your Gas Generation needs, and should you require any further assistance or support please do not hesitate to contact Peak Scientific or the Peak Partner from which you purchased your Generator.

Safety Notices

Peak Scientific Instruments cannot anticipate every possible circumstance which may represent a potential hazard. The warnings detailed within this document detail the most known potential hazards, but by definition cannot be all inclusive. If the user employs an operating procedure, item of equipment or a method of working which is not specifically recommended by Peak Scientific, the user must ensure that the equipment will not be damaged or become hazardous to persons or property.

Symbols

This document uses the following symbols to highlight specific areas important to the safe and proper use of the Generator

 WARNING	<p>A WARNING notice denotes a hazard. It calls attention to an operating procedure, process or similar, which if not correctly performed or adhered to, could cause personal injury or in the worst case death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood or met.</p> <p>Une note AVERTISSEMENT indique un danger. Elle attire l'attention sur une procédure de fonctionnement, un processus ou autre qui, s'il/elle n'est pas effectué(e) correctement ou respecté(e), peut entraîner des blessures personnelles ou, dans le pire des cas, la mort. Ne continuez pas lorsqu'il y a une note AVERTISSEMENT si les conditions indiquées ne sont pas totalement comprises ou respectées.</p>
 CAUTION	<p>A CAUTION notice denotes a hazard. It calls attention to an operating procedure, process or similar, which if not correctly performed or adhered to, could cause damage to the Generator or the Application. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood or met.</p> <p>Une note ATTENTION indique un danger. Elle attire l'attention sur une procédure de fonctionnement, un processus ou autre, qui, s'il/elle n'est pas effectué(e) correctement ou respecté(e), peut endommager le générateur ou l'application. Ne continuez pas lorsqu'il y a une note ATTENTION si les conditions indiquées ne sont pas totalement comprises ou respectées.</p>
	<p>Caution, risk of electric shock. Ensure power to the Generator has been removed before proceeding.</p> <p>Attention, risque de choc électrique. Assurez-vous que l'alimentation du générateur a été coupée avant de continuer.</p>

Safety Notice to Users



These instructions must be read thoroughly and understood before installation and operation of your Peak Precision Hydrogen Generator. Use of the Generator in a manner not specified by Peak Scientific MAY impair the SAFETY provided by the equipment.

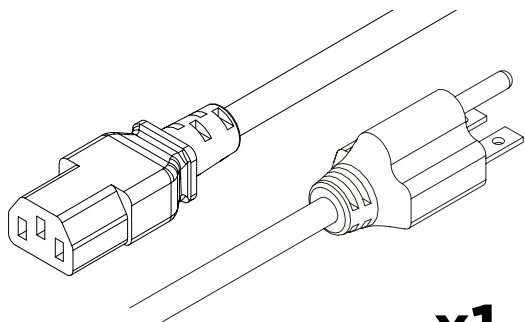


When handling, operating or carrying out any maintenance, personnel must employ safe engineering practices and observe all relevant local health and safety requirements and regulations. The attention of UK users is drawn to the Health and Safety at Work Act 1974, and the Institute of Electrical Engineers regulations.

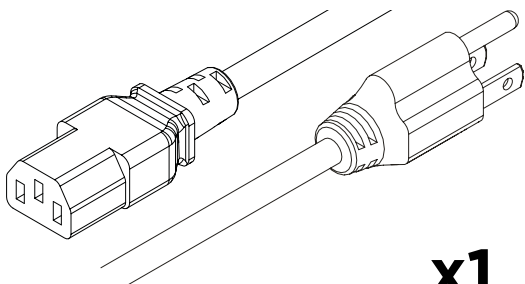


If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

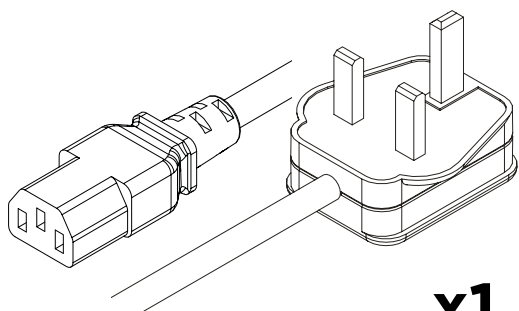
Fittings Kit



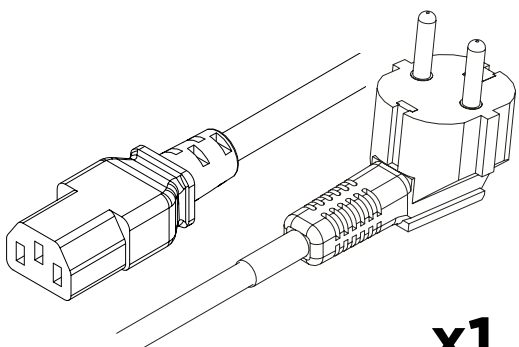
x1
US Mains Cable C13 6-15 04-1029



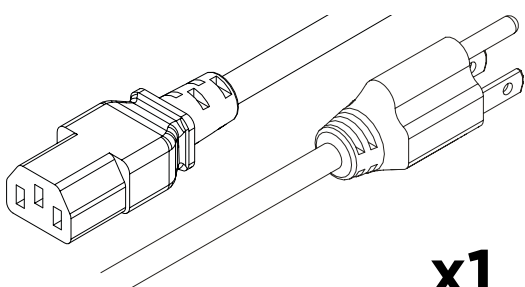
x1
US Mains Cable C13 5-15 04-1039



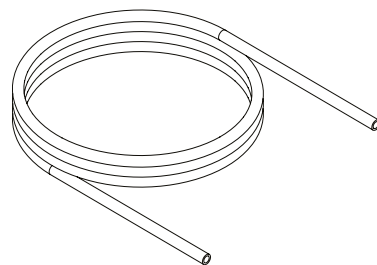
x1
UK Mains Cable C13 04-1028



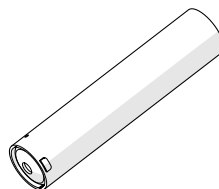
x1
EU Mains Cable C13 04-1038



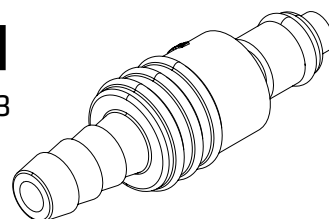
x1
JIS Cable C13 100V 04-1006



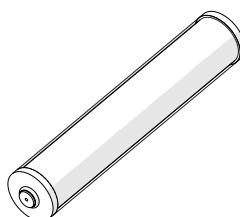
x1m
*Tygon Tubing 05-3131



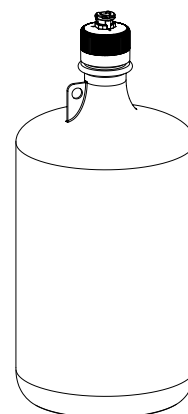
x1
DI Capsule 3302583



x1
*Barbed Fitting 05-7029



x1
***Desiccant Cartridge 3302581

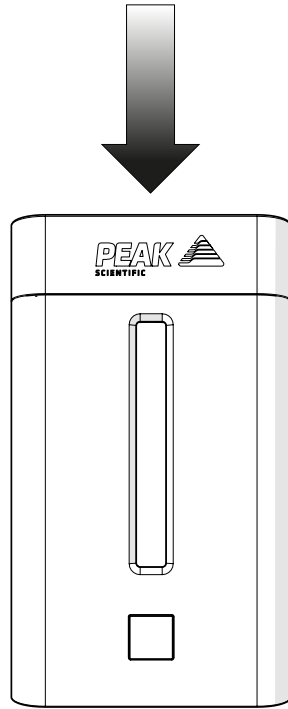


x1
****4L Water Bottle 10-9016



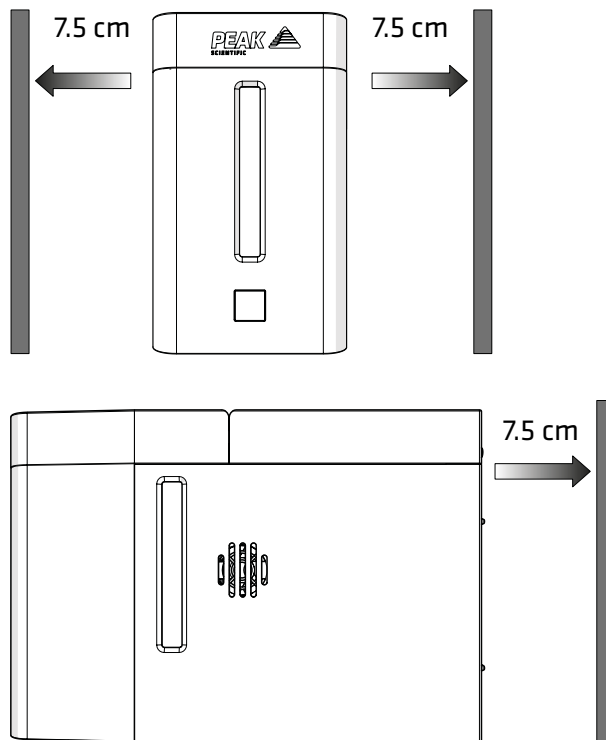
x1
Dryer Cap Removal Tool 3304050

1.



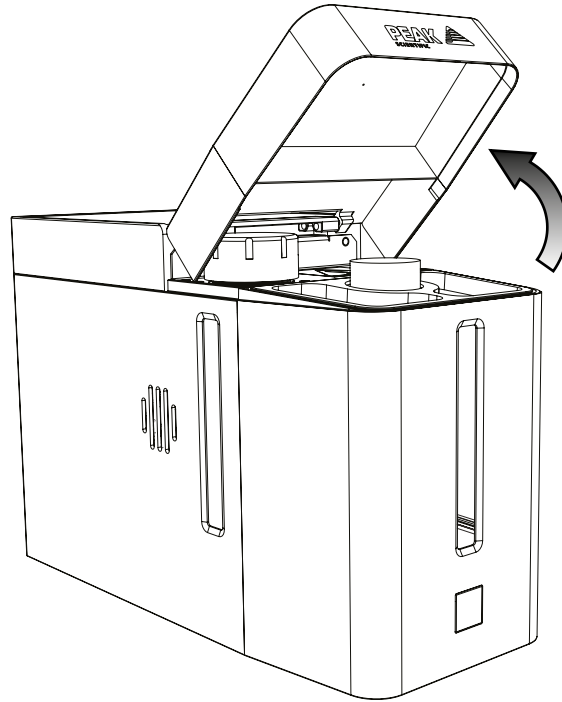
Unpack the generator from the shipping crate, as per the instructions on the box and position on a flat surface, in desired area.

2.



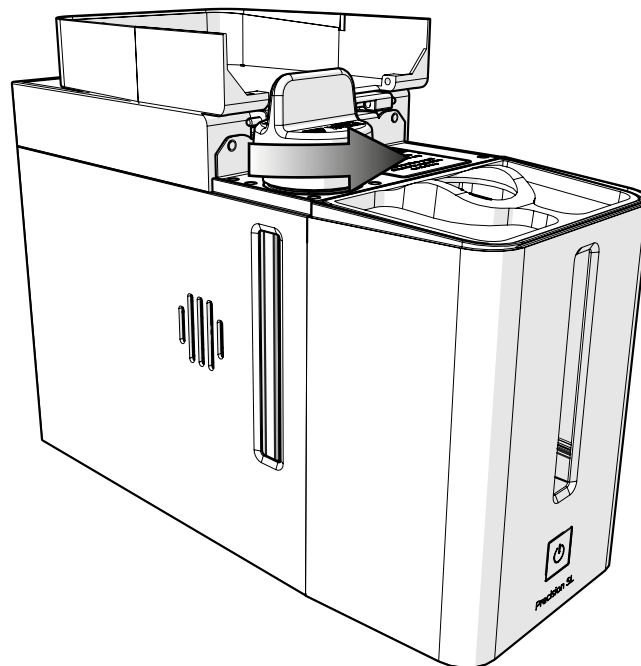
Ensure that there is at least 7.5 cm of space, to the sides and rear of the generator, to allow sufficient air flow and ventilation

3.



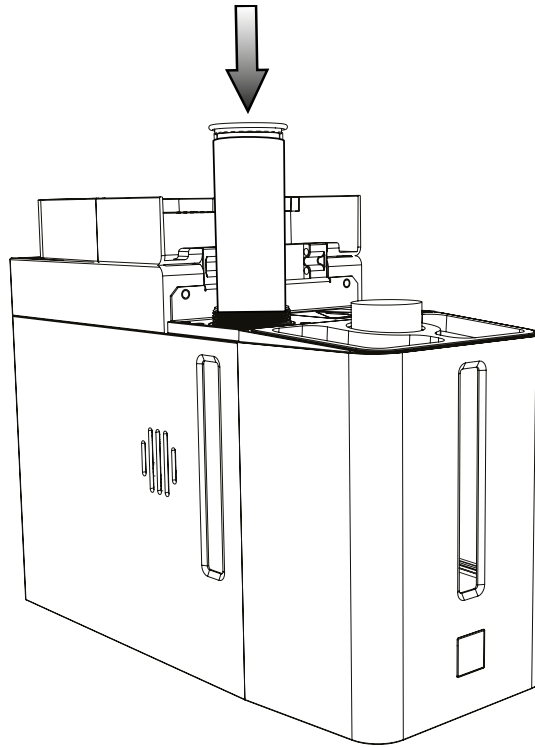
To fit the **Desiccant Cartridge 3302581**, first open the top panel by lifting gently.

4.



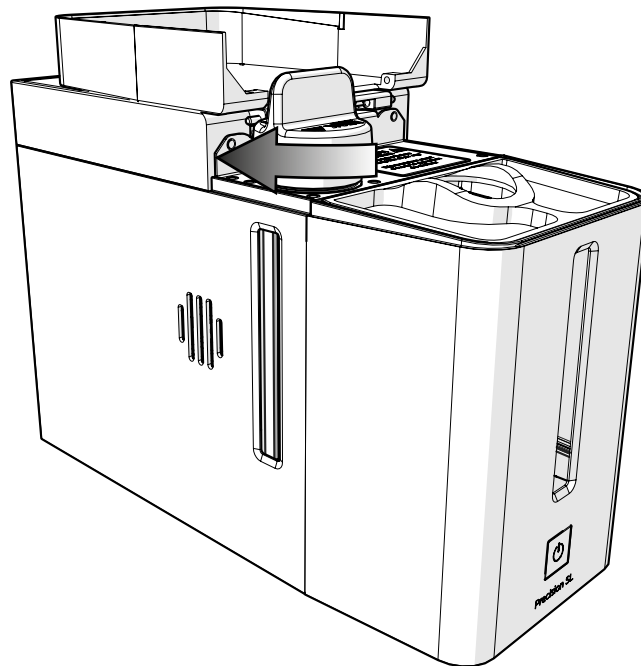
Using the provided **Dryer Cap Removal Tool 3304050**, loosen and remove the cap of the desiccant dryer by turning counter-clockwise.

5.



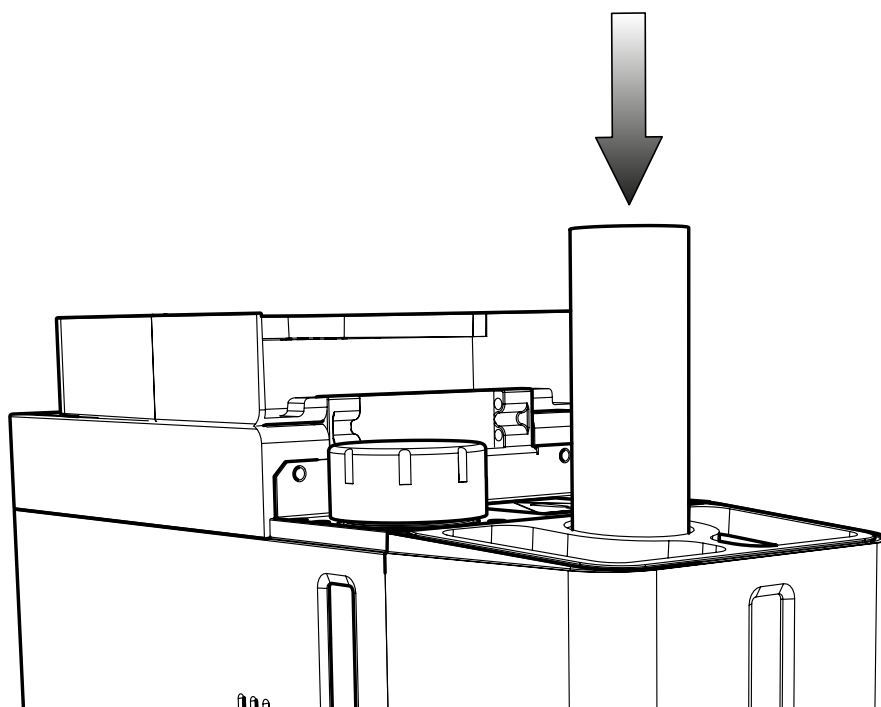
Fit the **Desiccant Cartridge 3302581**.

6.



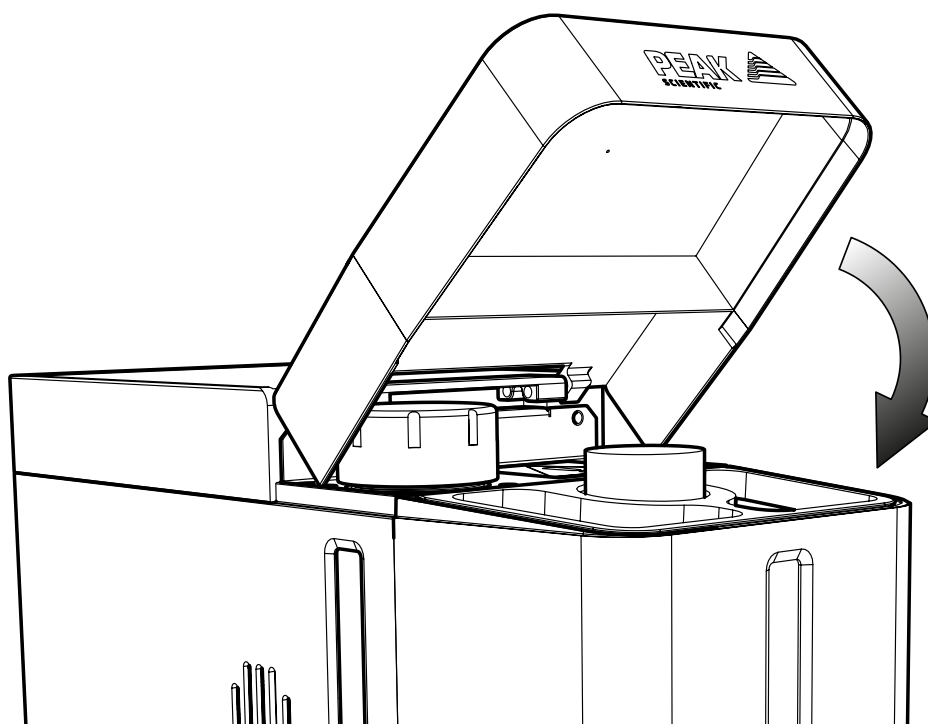
Replace the cap using the **Dryer Cap Removal Tool 3304050** by turning clockwise.
Ensure that the cap is 'hand-tight' and not overtightened.

7.



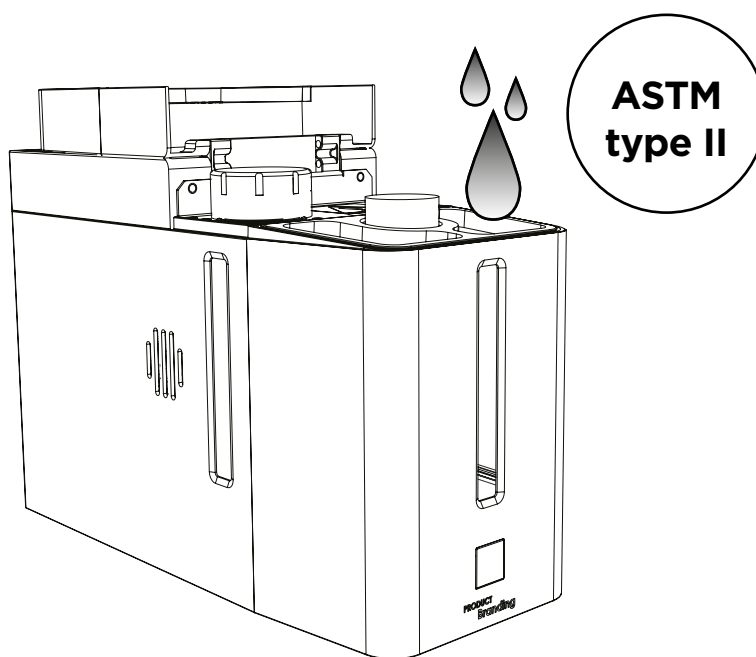
Fit the **DI capsule 3302583** into the recess and **rotate 90° clockwise** to lock in position.

8.



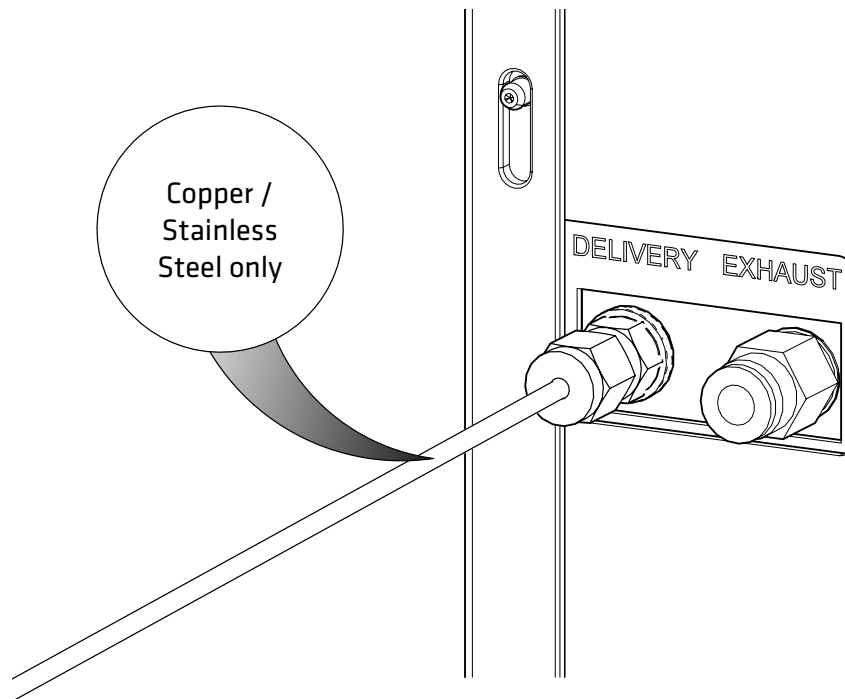
Close the top panel.

9.



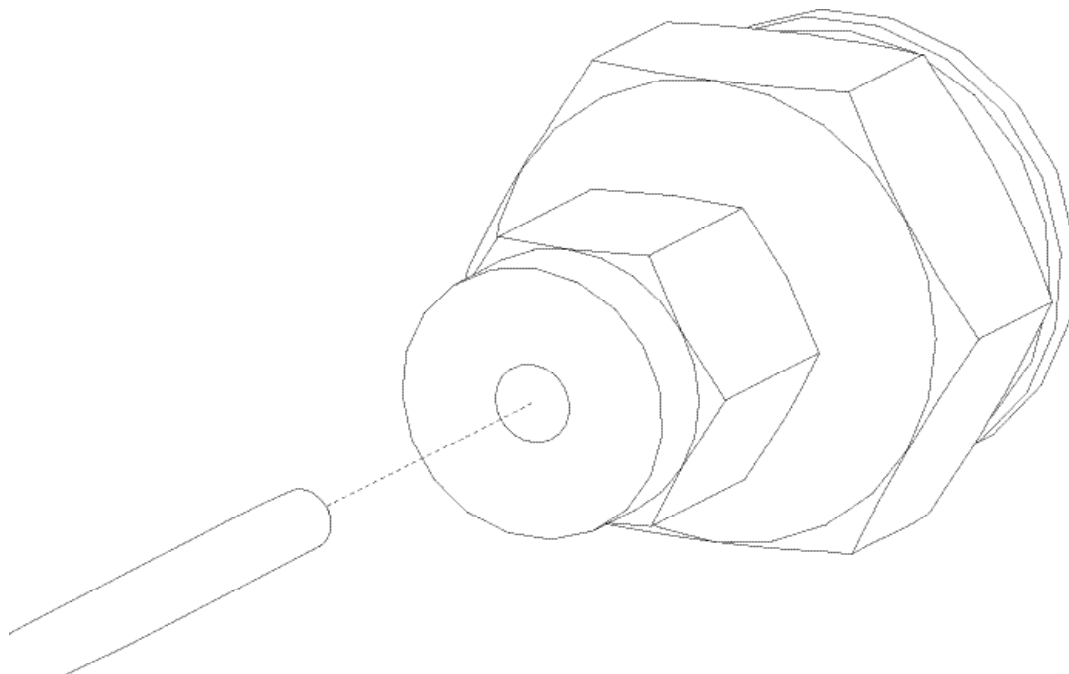
Fill deionized water into water tank (Manual fill units) or connect deionized water supply (auto fill / pressure fill options) **following step below.**

10.



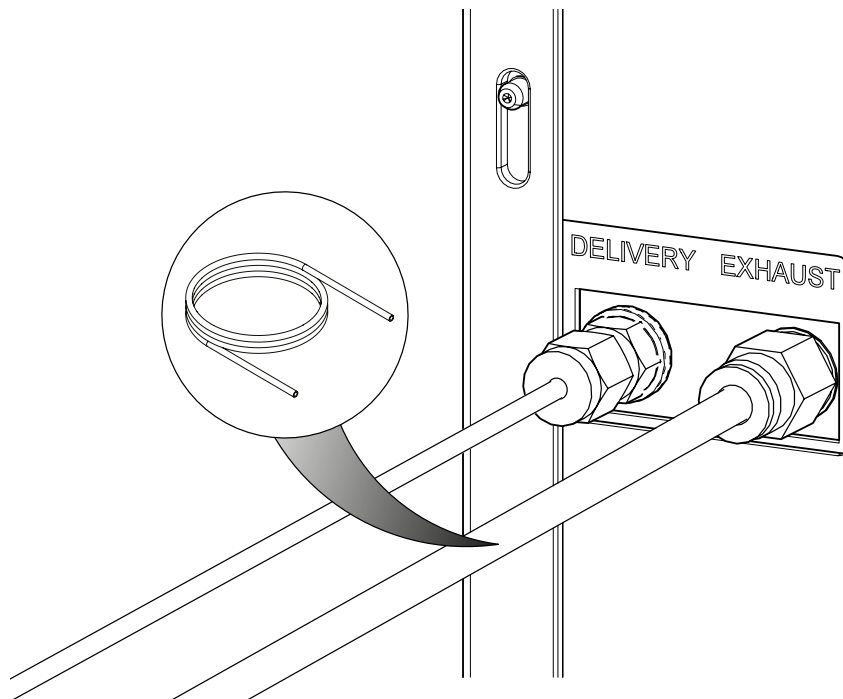
Connect tubing to the **H2 delivery port** at the rear of the generator, using the 1/8" swagelok compression fitting provided. **Use new laboratory-grade copper or stainless steel tubing only.**

11.



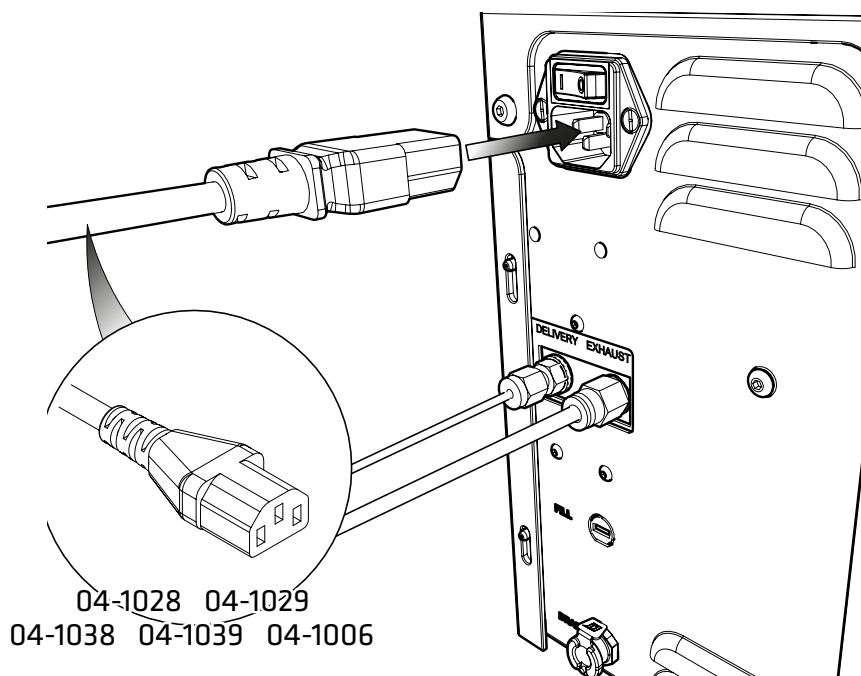
Connect the other end of the tubing to the **Application**.

12.



Fit appropriate 6mm tubing to **H2 Exhaust** output. The exhaust port must not be plugged.

13.

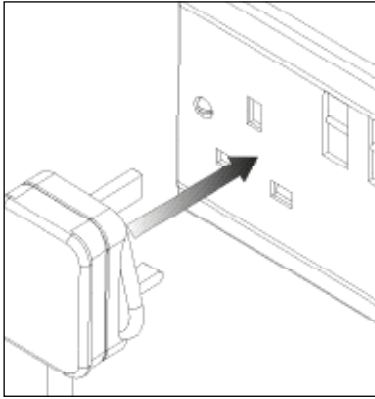


Select the appropriate **mains cable** from the fittings kit and plug the IEC 60320/C13 cable into the **mains input** at the rear of the generator.

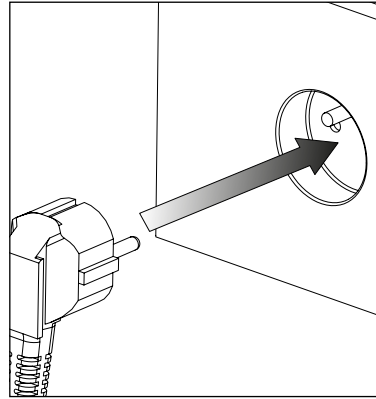
Please note both 110V and 230V US cables have been supplied, ensure correct mains cable is used.

14.

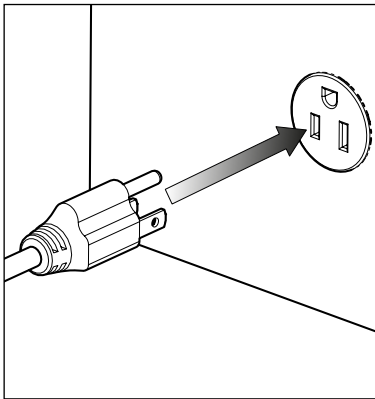
UK



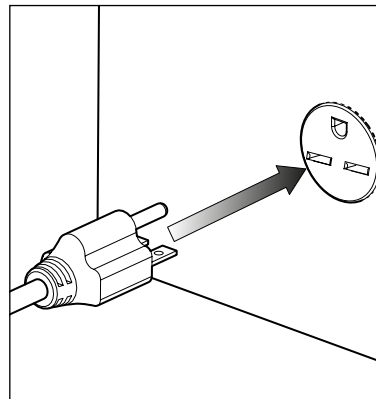
EU



US
110V



US
230V

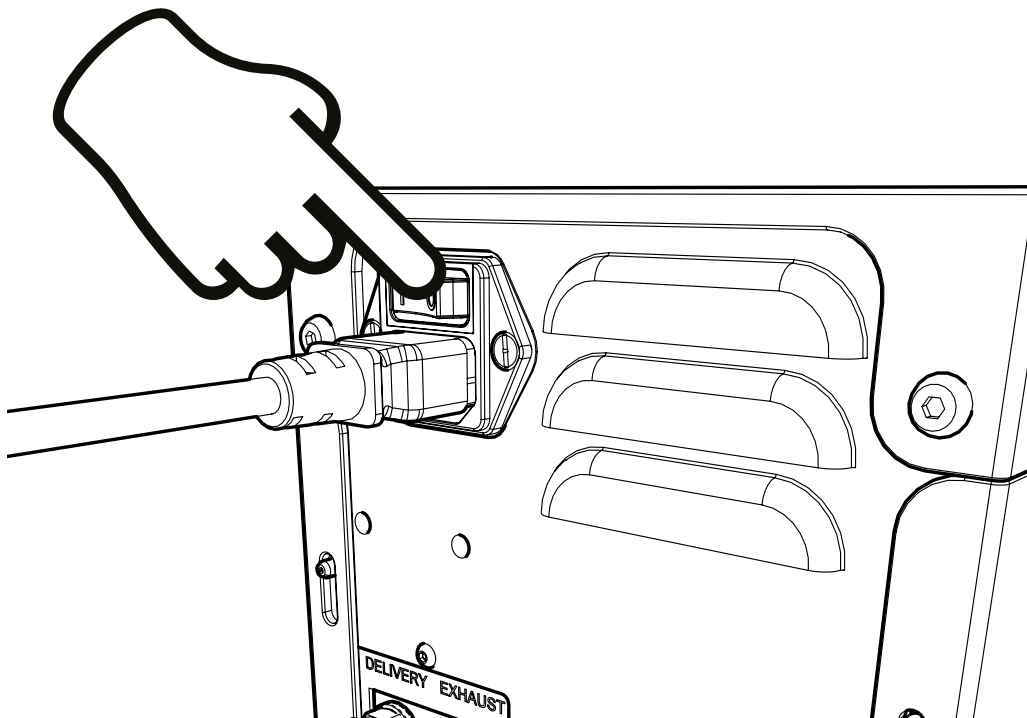


100-240VAC 50/60Hz

Plug the **mains cable** into an appropriate **100-240VAC 50/60Hz single phase power supply**.

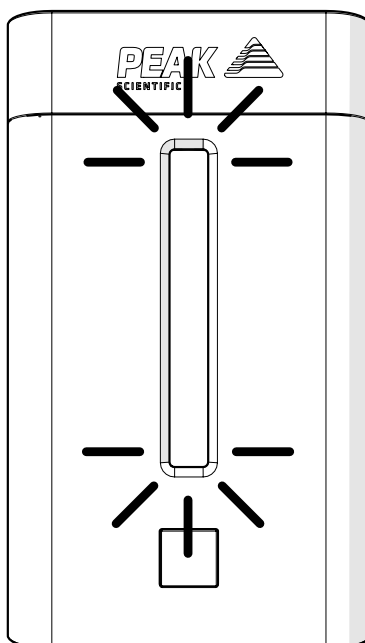
CAUTION ensure the correct cable has been selected for your electrical supply

15.



Turn the generator on, using the **switch** on the back of the unit.

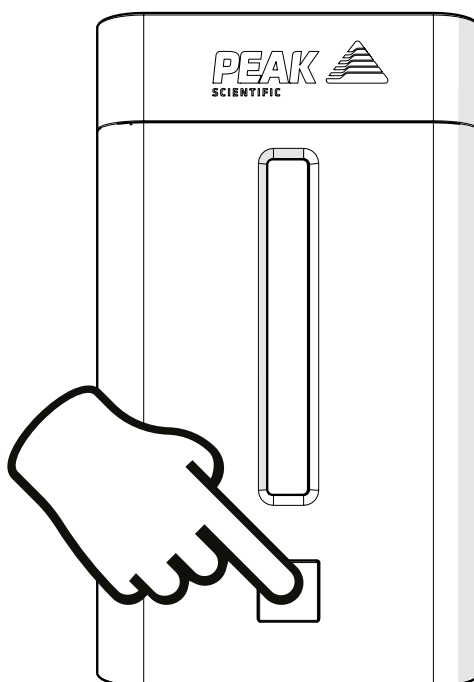
16.



The **LEDs** will **brighten and dim in green** until diagnostics are complete. Once diagnostics are complete, **the green LEDs will be solid**.

In the unlikely event that diagnostics are unsuccessful, **the LEDs will turn orange**. See Table on Page 15.

17.

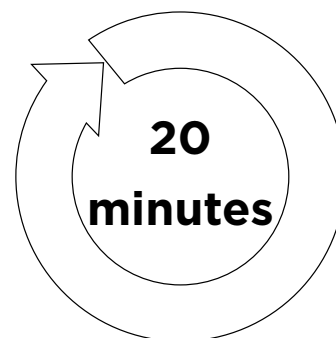
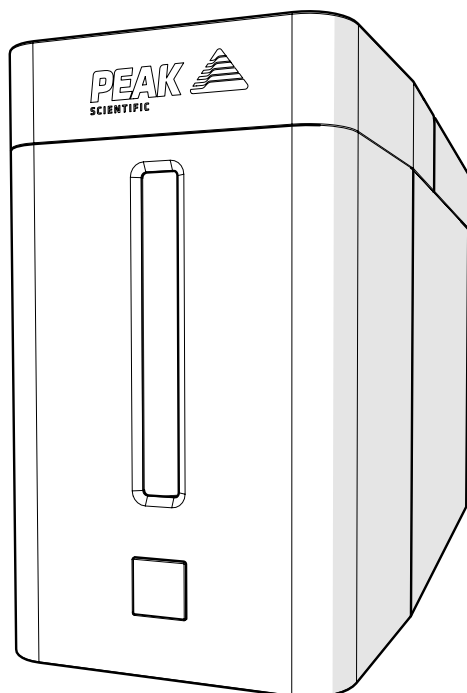


Pressing the front button will begin the supply of gas to the application.

The system can be stopped at any time by pressing **the front button again**.

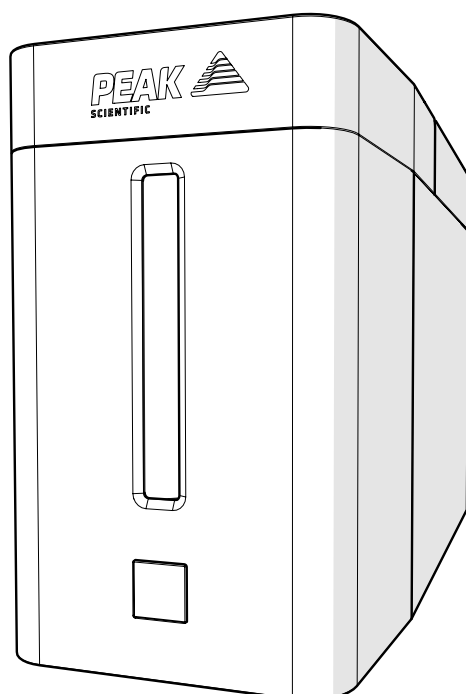
This will return the generator to Standby mode.

18.



In order for the system to maintain internal pressure required for normal operation, the output valve will close and open until the delivery line is pressurised. Once pressure between the generator and application is stable, gas will be supplied by the generator as normal. **To prevent excess release of hydrogen in the event of a leak between the generator and application, the generator's output will remain closed if pressure has not stabilised within 20 minutes.**

19.

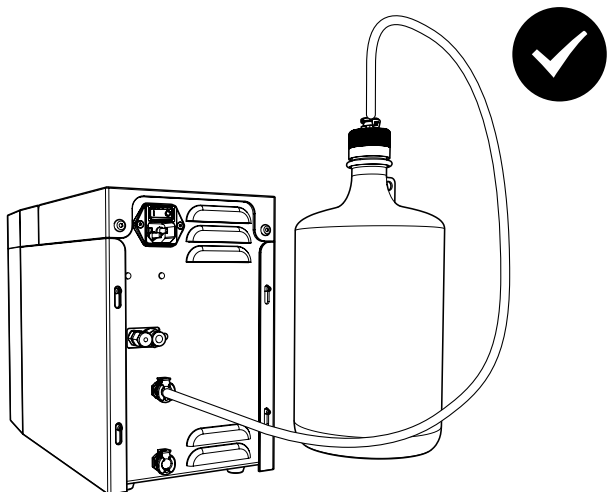


CONGRATULATIONS

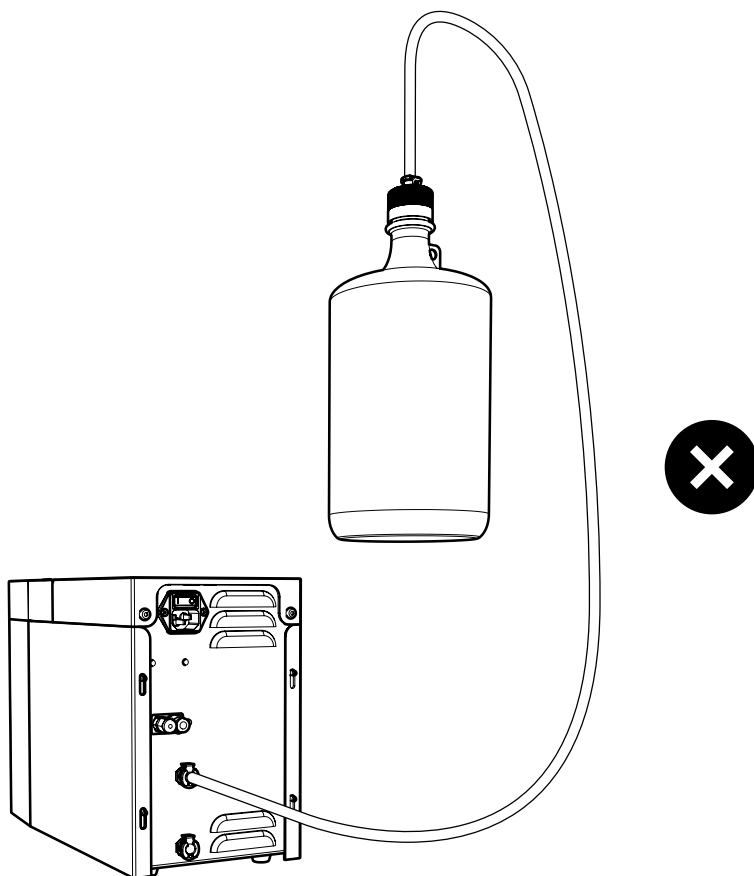
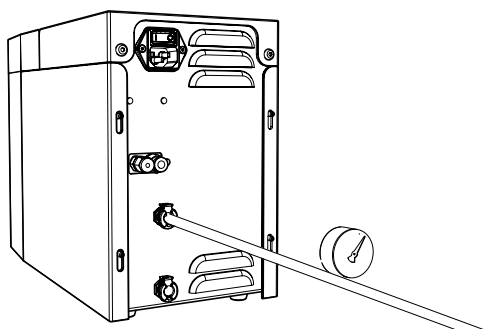
Your **PEAK SCIENTIFIC** gas generator is now fully installed, operational and ready to supply gas on demand to your instrument.

General Notes

For Precision Hydrogen SL generators with automatic pumped water fill, ensure the water supply bottle is not located above the height of the generator, and that the supply is not pressurised. Generators with automatic valved water fill may be used with pressurised deionised water supplies between 1-3 bar.



Pressurized supply is not suitable for automatic pumped water fill.



Electrical requirements are 100-240V rms nominal. However, running continuously at voltages outwith this range is not recommended. Extended periods at extremes can have a detrimental effect on the operation and life of the Generator.

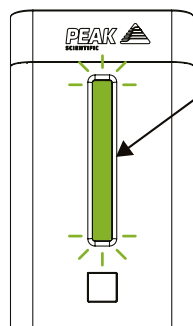
Ensure that all pipework between generator and equipment is checked for leaks.

Please familiarise yourself with the full **User Manual** available at www.peakscientific.com/downloads. This includes all other technical specifications, operating instructions, service requirements, contact details and trouble shooting.

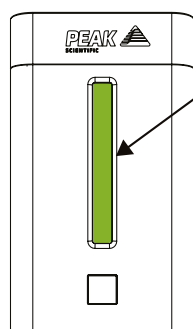
The fixed delivery pressure of 100psi (6.9 bar) from the Precision Hydrogen SL is suitable for all GC-FIDs from major manufacturers. The gas pressure will be managed by the GC. If for any reason you need to regulate the pressure to below 100psi, please contact Peak for details of an appropriate pressure regulator.

LED Indicators

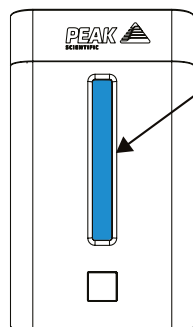
The LED indicator on the front of the generator will flash or change colour to indicate the generators current operating state. Please refer to the chart below for information regarding the different states.



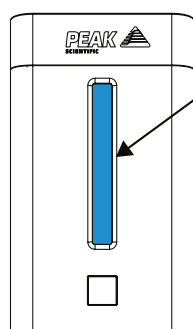
Pressurizing
Mise sous pression
(Green/Vert)



At Pressure
À pression
(Green/Vert)



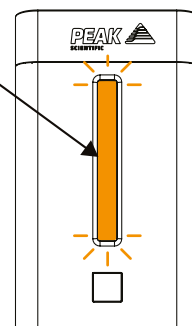
Depressurizing
Dépressurisation
(Blue/Bleu)



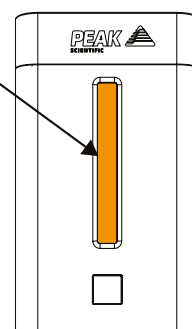
Depressurised
Dépressurisé
(Blue/Bleu)



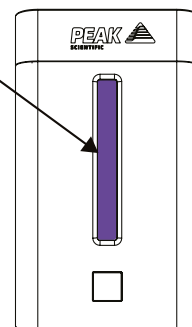
See Manual
Voir manuel
(Amber/Ambre)



Contact Peak
Contacter Peak
(Amber/Ambre)



Contact Peak
Contacter Peak
(Purple/Violet)



Go Online or Complete and Return

You can register for your **FREE 24 month Warranty** with ease online at www.peakscientific.com/protected.

Alternatively, you can send the completed form to Peak Scientific by post or email at warranty@peakscientific.com.

Go Online or Complete and Return

You can register for your **FREE 12 month Warranty** with ease online at www.peakscientific.com/protected.

Alternatively, you can send the completed form to Peak Scientific by post or email at warranty@peakscientific.com.

Product Warranty Registration			
Contact name			
Email address			
Company			
Address			
City/town			
Postcode			
Country			
Telephone			
Generator serial #			
Model type			
Installation date			
Do you still use an alternative gas solution i.e. cylinders or bulk liquid?	Yes	No	
What gas requirements do you have in your lab?	Hydrogen	Nitrogen	Zero Air

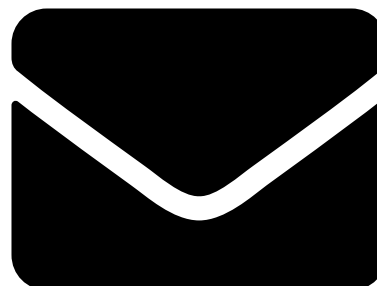
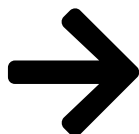
Extend your cover with

Peak Scientific offer comprehensive gas generator after sales support packages. Peak [Protected] aftercare support can guarantee an on-site response within 72 hours*, genuine parts from our ISO9001 approved factory and a 95% first-time fix rate. See our enclosed Peak [Protected] leaflet for further information.

Important!

You have 1 month to register your Peak Scientific product from the date of installation. Once registered the warranty will be honoured for a period of 12 months. If you wish to defer the installation of your generator, you must notify Peak Scientific immediately by emailing warranty@peakscientific.com. For generators that remain unregistered after 1 month from the shipment date, the warranty will be considered active from the date of factory dispatch.

* Complete Plan only



Important!

You have **1 month to register** your Peak Scientific product from the date of installation. Once registered the warranty will be honoured for a period of 24 months. If you wish to defer the installation of your generator, you must notify Peak Scientific immediately by emailing warranty@peakscientific.com. For generators that remain unregistered after 1 month from the shipment date, the warranty will be considered active from the date of factory dispatch.

The 24m warranty is conditional on completion of replacement of the de-ionizer cartridge every 12 months from the date of first use of the generator. Failure to change the de-ionizer cartridge will render the 24m warranty null and void.

Please visit www.peakscientific.com/downloads to download the full User Manual for your gas generator.

[**PEAK Protected**]TM

Peak Scientific has highly trained, fully certified Field Service Engineers located in over 20 countries across every continent around the world. This allows us to provide an industry-leading rapid response service to our customers. With [**Peak Protected**], your laboratory's productivity becomes our top priority.

To discuss Peak Protected generator cover and payment options speak to your local Peak Representative or for further information contact: protected@peakscientific.com

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Tel: +44 141 812 8100
Fax: +44 141 812 8200

For further information on any of our generator products please contact marketing@peakscientific.com