

Infinity 90 Series Site Preparation Guide



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Customer Responsibilities

To ensure a successful and timely installation of your Peak generator, please refer to this set of requirements.

Correct site preparation is the first key step in ensuring that your generator and systems operate reliably over an extended lifetime.

This document is an information guide and checklist that outlines the requirements for your site.

It is essential your site meets the following specification prior to the installation date.

For details, see specific sections within this document

- The necessary spatial requirements are met.
- The correct environment is provided for the generator.
- Electrical outlet locations and quantities are planned.
- Adequate exhaust ventilation is provided.
- The correct tubing lengths and diameters are used in relation to the distance from the instrument.

Failure to meet the Site requirements of your Peak generator as stated above and detailed in this document could result in the unit underperforming and **possible loss of warranty**.

Please sign below to confirm your compliance with the aforementioned requirements.

Once complete please return to Peak Scientific, or whomever the unit was purchased from.

Return addresses can be found on the back page of this document.

Name: _____ Company: _____

Signed: _____ Date: _____

Model: _____ Cust. Sales Order No.: _____

Change History

Rev.	Comment	Name	Date
1			
2			
3			
4			




Related Manuals

Document number	Manual name	Description
UM-Infinity90	Infinity 90 Series User Manual	Describes the operation of the generator and all service requirements. Supplied with the generator.
IG-Infinity90	Infinity 90 Series Installation Guide	Details the installation process of the generator. Supplied with the generator.

Safety Notices

Symbols

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

	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.
	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.
	Caution, risk of electric shock. Ensure power to the Generator has been removed before proceeding.

Safety Notice to Users



These instructions must be read thoroughly and understood before installation and operation of your Peak Infinity 90 Series 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.

Technical Specification

Environment

	9010	9020	9030	9040
Minimum Operating Ambient Temperature	5°C (41°F)			
Maximum Operating Ambient Temperature*	30°C (86°F)			
Maximum Relative Humidity	70%			

* Maximum safety ambient temperature 35°C

** When taken out of storage the Generator should be allowed to acclimatize at room temperature for a minimum of 3 hours before operation.

Generator Outlets

Minimum Air Inlet Pressure	125 psi (8.7 bar)			
Maximum Air Inlet Pressure	145 psi (9.9 bar)			
Minimum Air Inlet Flow	260l/min	520l/min	780l/min	1040l/min
Maximum Gas Output Pressure	100 psi (6.8 bar)			
Maximum Pressure Drop (Outlet-Inlet)	8 psi (0.55 bar)			
Maximum Outlet Flow (High Purity Nitrogen)	140 l/min	280 l/min	420 l/min	560 l/min
Start-Up Time For Purity	60 minutes			
Particles	0.01 µm			

Electrical Requirements

Voltage	100V	230V
Frequency	60Hz	50Hz
Current	0.222A	0.123A
Fuse	S506-1.6-R	
Input connection	C20 Plug	
Power cord (Supplied)	C19 socket to local connection (13A minimum)	
Pollution degree	2	
Installation category	II	

General

Dimensions in cm (inches) W x D x H	50 (19.6) x 80 (31.5) x 115 (45.2)			
Weight kg/lbs	70/154	75/165	80/176	85/187
Shipping weight kg/lbs	73/161	78/172	83/183	88/194
Noise level	10 dBA @ 1m			



It should be noted that the gas pressures and flows are factory set. The pressures shown on the Generator front panel are in excess of the maximum inlet pressure of the Mass Spectrometer. This is to allow for known pressure drops.

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Technical Specification

Environment

	9050	9060	9070	9080
Minimum Operating Ambient Temperature	5°C (41°F)			
Maximum Operating Ambient Temperature*	30°C (86°F)			
Maximum Relative Humidity	70%			

* Maximum safety ambient temperature 35°C

** When taken out of storage the Generator should be allowed to acclimatize at room temperature for a minimum of 3 hours before operation.

Generator Outlets

Minimum Air Inlet Pressure	125 psi (8.7 bar)			
Maximum Air Inlet Pressure	145 psi (9.9 bar)			
Minimum Air Inlet Flow	1300l/min	1560l/min	1820l/min	2080l/min
Maximum Gas Output Pressure	100 psi (6.8 bar)			
Maximum Pressure Drop (Outlet-Inlet)	8 psi (0.55 bar)			
Maximum Outlet Flow (High Purity Nitrogen)	700 l/min	840 l/min	980 l/min	1120l/min
Start-Up Time For Purity	60 minutes			
Particles	0.01 µm			

Electrical Requirements

Voltage	100V	230V
Frequency	60Hz	50Hz
Current	0.222A	0.123A
Fuse	S506-1.6-R	
Input connection	C20 Plug	
Power cord (Supplied)	C19 socket to local connection (13A minimum)	
Pollution degree	2	
Installation category	II	

General

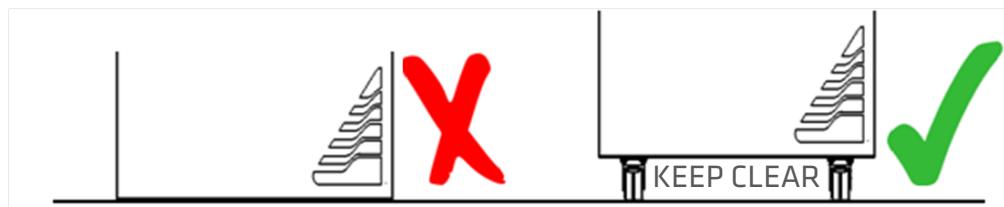
Dimensions in cm (inches) W x D x H	50 (19.6) x 80 (31.5) x 115 (45.2)			
Weight kg/lbs	90/193	95/209	100/220	105/231
Shipping weight kg/lbs	93/205	98/216	103/227	108/238
Noise level	54 dBA @ 1m			

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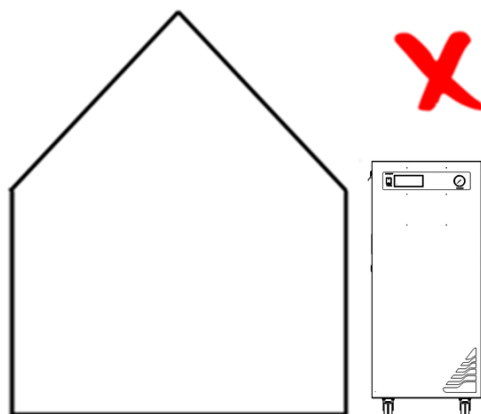
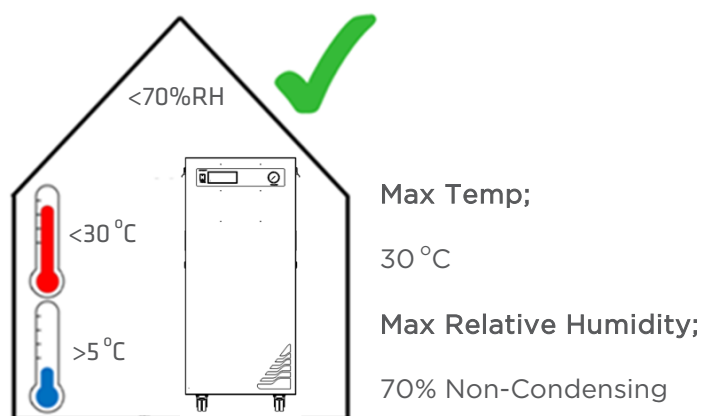
Site preparation

Environmental control

The generator must remain on its castors to allow air intake from the bottom of the generator.



If the generator is stored in an enclosed space the environment must be controlled via an air conditioner or extraction fan.

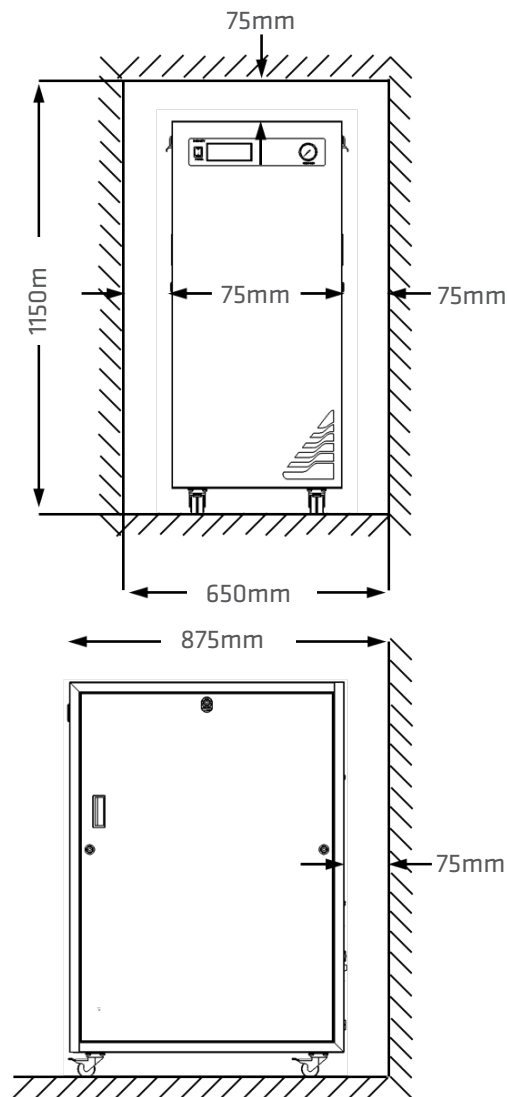


Generator **MUST NOT** be stored or installed outside.

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Space provision

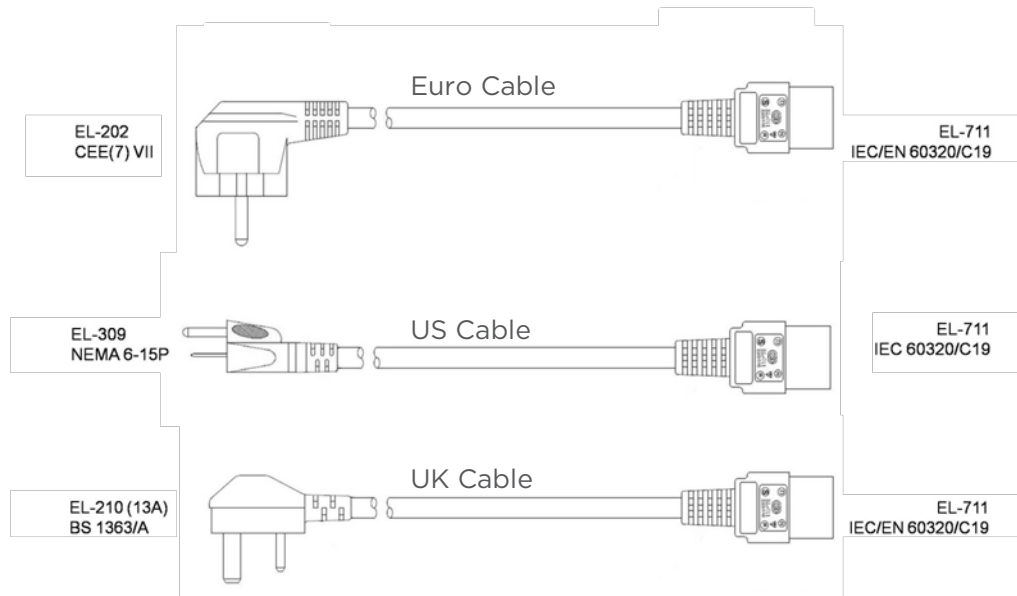
The minimum space should be provided as follows....



Failing to provide adequate cooling space around the generator may cause damage to the membranes and cause the compressors to run continually. This will reduce service life and invalidate warranty.

Electrical requirements

The below power cables are supplied with the generator.



For cables pertaining to countries not displayed above, it is the responsibility of the end user to provide an appropriate power cable which meets the requirements defined in the Technical Specification section on page 6.

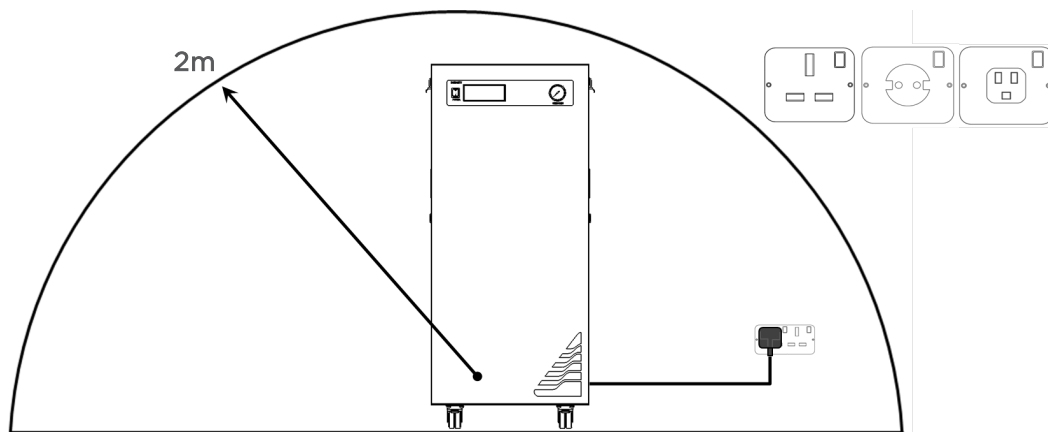


This unit is classified as **SAFETY CLASS 1**. **THIS UNIT MUST BE EARTHED**. Before connecting the unit to the mains supply, please check the information on the serial plate. The mains supply must be of the stated AC voltage and frequency.

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The power cable supplied with the generator is 2.5m long.

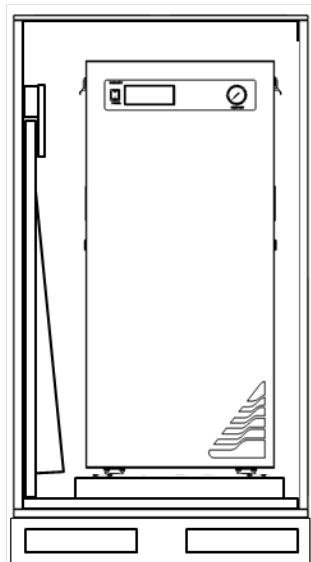
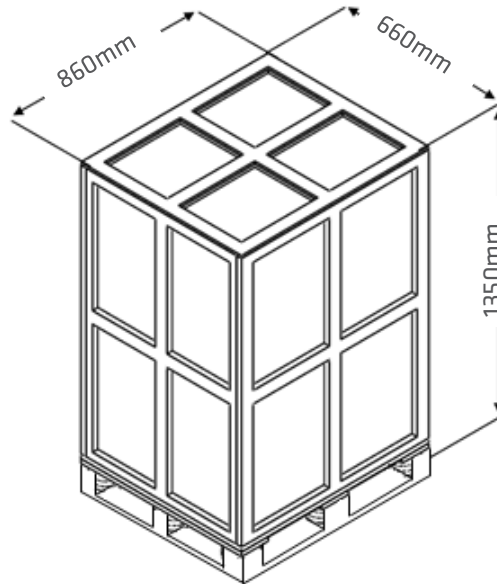
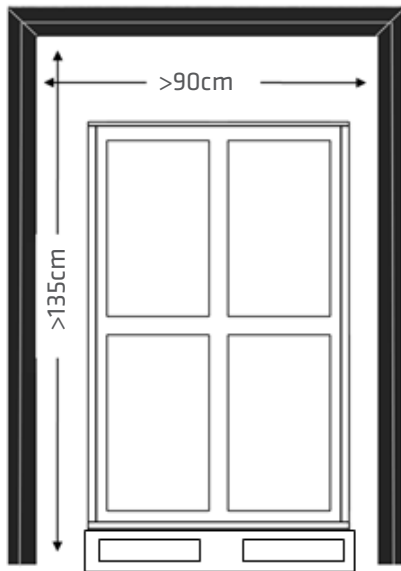
A mains socket providing the power should be located adjacent to the generator and within a 2m radius to the generator.



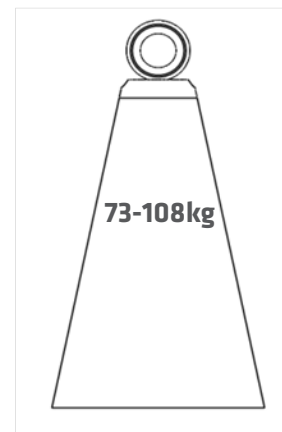
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On-Site Transit

When moving the generator in its shipping crate, doorways and other openings such as elevators must fit with the sizes in the figure below.



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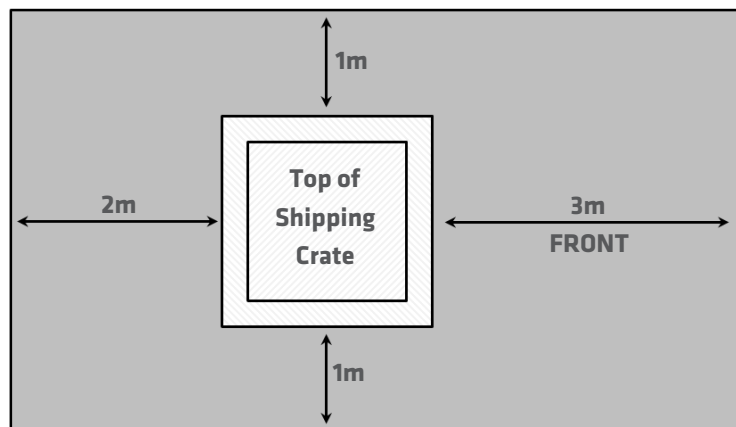


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Unpacking

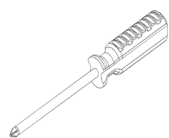
Space Required

The image below shows the minimum space required to unpack the generator from its shipping crate.



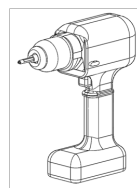
Tools

Required :



Pozidrive #2 Screwdriver

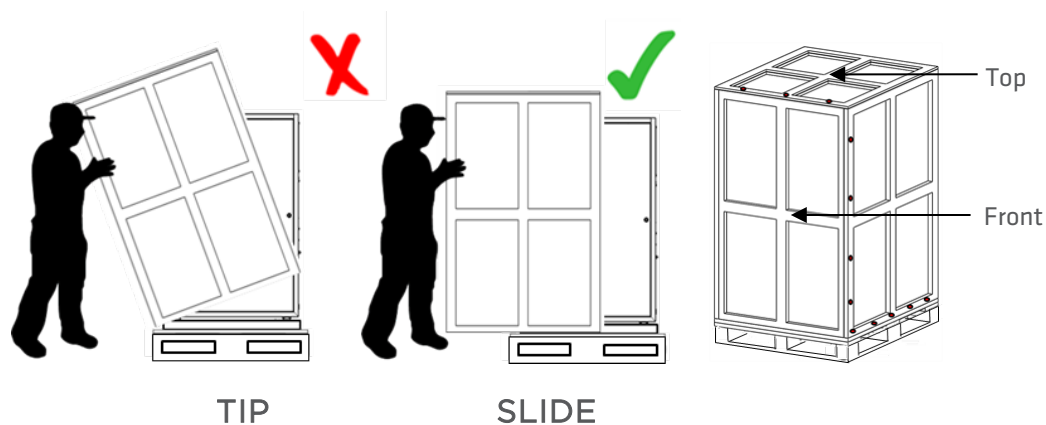
Recommended :



Drill with Pozidrive #2 Bit

Unpacking

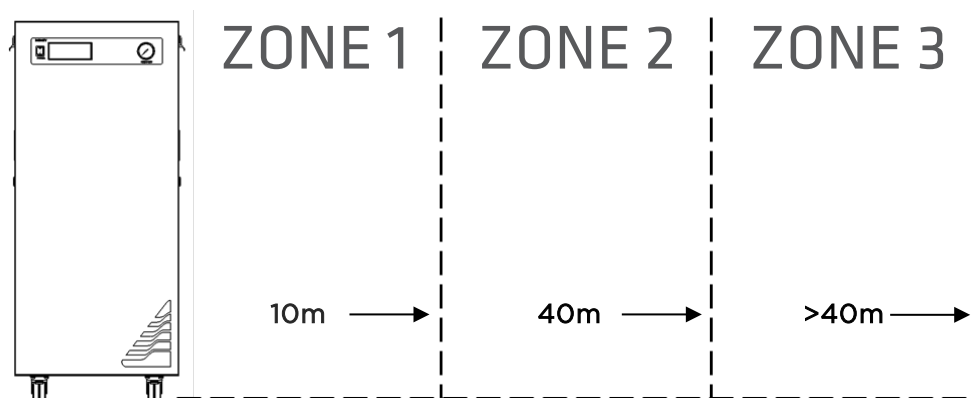
Remove all screws encircled in red, use Drill or Pozidrive #2 screwdriver. There is also two screws on the rear and three on the left side of the crate. Once the screws have been removed, slide back the upper half of the crate.



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Tubing lengths

Tubing sizes should be chosen with accordance to the diagram below.

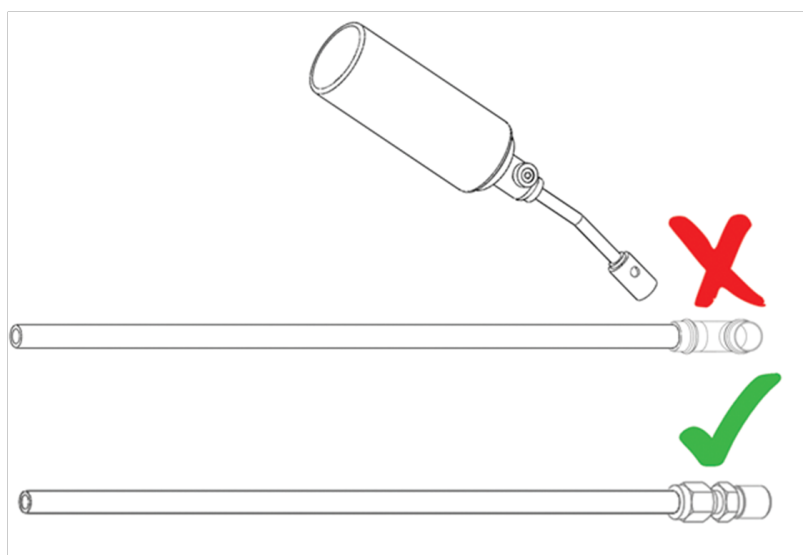


Zone	Distance from Instrument	Tubing Thickness OD/ID mm (Inches)
1	Up to 10m	6mm/4mm (1/4" 3/16")
2	Up to 40m	10mm/8mm (3/8" 5/16")
3	Over 40m	Consult Peak Scientific



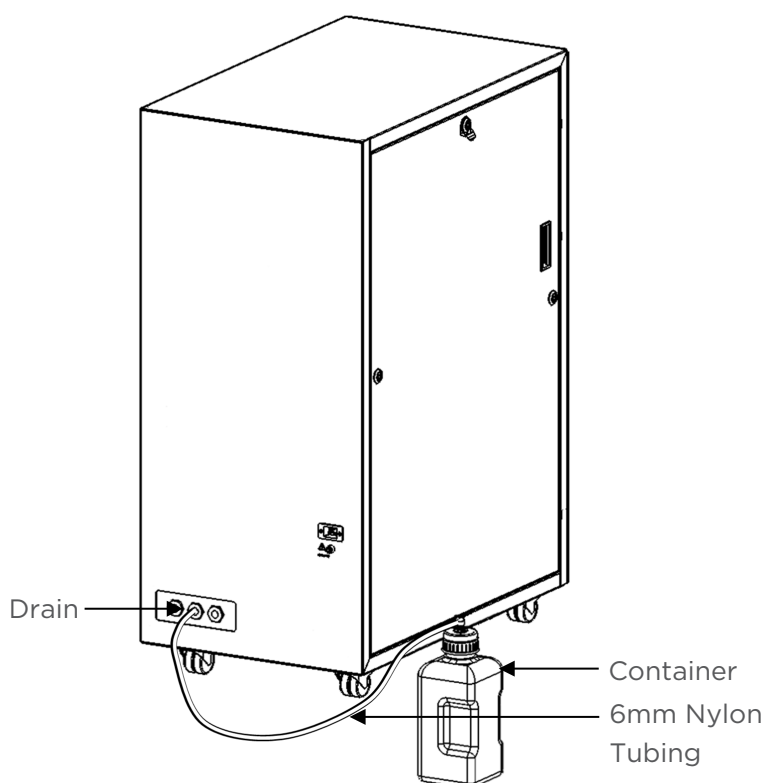
The diameter of the tubing which will be connected to the gas outlet is important and is determined by the length of tubing required. Failure to follow these recommendations could lead to accelerated compressor wear.

Copper Tubing



Soldering may lead to contamination. Compression fittings recommended.

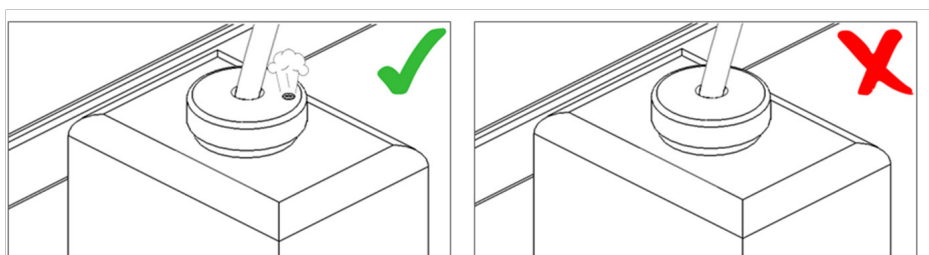
Drainage



Connect the 3m Nylon tube to the drain outlet, ensure the tube is pushed fully in and gripped securely by the fitting.

Fit the other end of the drain line to a suitable drain connection or container.

Containers **must not** be airtight.



Peak Scientific UK

Fountain Crescent
Inchinnan Business Park
Inchinnan
PA4 9RE
Scotland, UK

Tel: +44 (0)141 812 8100
Fax: +44 (0)141 812 8200

Peak Scientific Germany

Herriotstrasse 1
60528 Frankfurt

Germany

Tel: +49 (0)69 677 33 490
Fax: +49 (0)69 677 33 200

Peak Scientific Taiwan

4F.-6, No.736
Zhongzheng Rd.
Zhonghe Dist.
New Taipei City

Tel: +886 2 8226 2383
Fax: +886 2 8226 9499

Peak Scientific North America

19 Sterling Road
Suite #1
Billerica, MA 01862

USA

Tel: +1 866 647 1649
Fax: +1 978 608 9503

Peak Scientific China

Room 606 Building 1
Lane 2277 Zuchongzhi
Road

Pudong New Area

Shanghai

201203, China

Tel: +86 21 5079 1190
Fax: +86 21 5079 1191

Peak Scientific Brazil

Peak Scientific Brasil
Av. Quieroz Filho
1700 - torre Sunny-Conj.
602
São Paulo SP Brasil

Tel: +1 866 647 1649

Peak Scientific India

202, Amsri Shamira
Old Lancer Line
Opp. St. Mary's Degree
College
S.D. Road Secunderabad
500 025, India

Tel: +91 40 2780 0663
Fax: +91 40 2780 0663

Peak Scientific Mexico

Solon 352
Col. Los Morales Polanco
11530 Mexico, D.F.

Mexico

Tel: +1 866 647 1649
Fax: +1 978 608 9503

Peak Scientific Japan K.K.

2-7-56, 2F Fuji Building 28
Kita Aoyama, Minato-Ku
Tokyo, Japan
107-0061

Tel: +81 3-6864-0468

Peak Scientific Africa

PO Box 478
Somerset Mall
7137

South Africa

Tel: +27 (0)2185 16542
Fax: +27 (0)8654 64473

Peak Scientific Australia

PO Box 65
Belmont
Victoria 3216

Australia

Tel: +61 1300 965 352

Peak Scientific Singapore

3 Science Park Drive
#03-14 The Franklin
Science Park Drive 1
Singapore, 118223

Tel: +65-6777 1966
Fax: +65-6777 1978