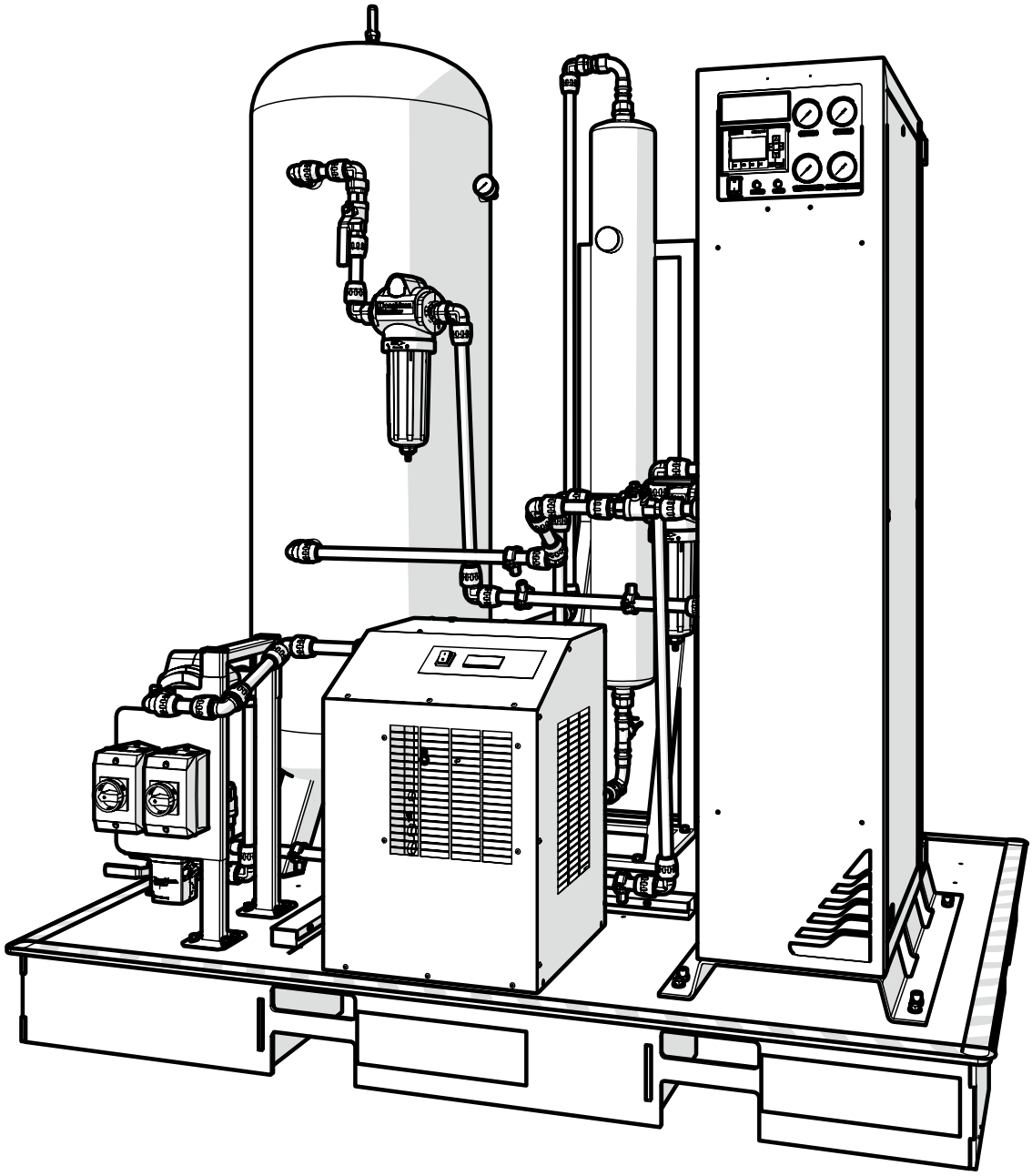
i-Flow N2 Select Skid System

User Manual



PEAK GAS GENERATION

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Change History

Rev	Comment	Name	Date

How to use this Manual

This manual is intended for end users and has been written as a reference document where you can skip to the relevant information.

Users can refer to the contents page to find the relevant information.

Please review each of the following sections carefully.

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

Introduction

The Peak Gas Generation i-Flow Select skidded Nitrogen system is designed to cater for a wide variety of industrial applications. Your system will have been carefully selected to meet your specific pressure, flowrate and purity requirements. If you have any questions regarding the sizing of your system, please do not hesitate to contact Peak Gas Generation or the Peak partner from which you purchased your system.

Peak Gas Generation is a trading name of Peak Scientific Instruments Ltd. All Peak Gas Generation products are manufactured by Peak Scientific Instruments Ltd.

Technical Description

Basic Concept

The i-Flow N2 Select is an all-in-one Nitrogen gas generation solution. It consists of an air dryer, filtration, carbon tower, nitrogen generator & process tank, all conveniently assembled on a plug & play skid plate. The system requires an inlet feed of compressed air supply to operate, which is passed through a refrigerant dryer & carbon tower, with pre-& post filtration at multiple stages before entering the i-Flow nitrogen generator. The generated nitrogen is then fed to a process tank, before returning back through the generator for a final quality/purity check, before passing downstream to the application. Should the demand for nitrogen be less than the rated output flow, or indeed should the demand stop, the generator will go into ‘Standby’ mode. At this point the gas generation system will stop producing nitrogen. Once demand resumes & the process tank pressure goes below a certain level, the generation system will resume normal operation and begin to produce nitrogen gas again.

General Construction

i-Flow N2 Select 1-3 Bank Assembly

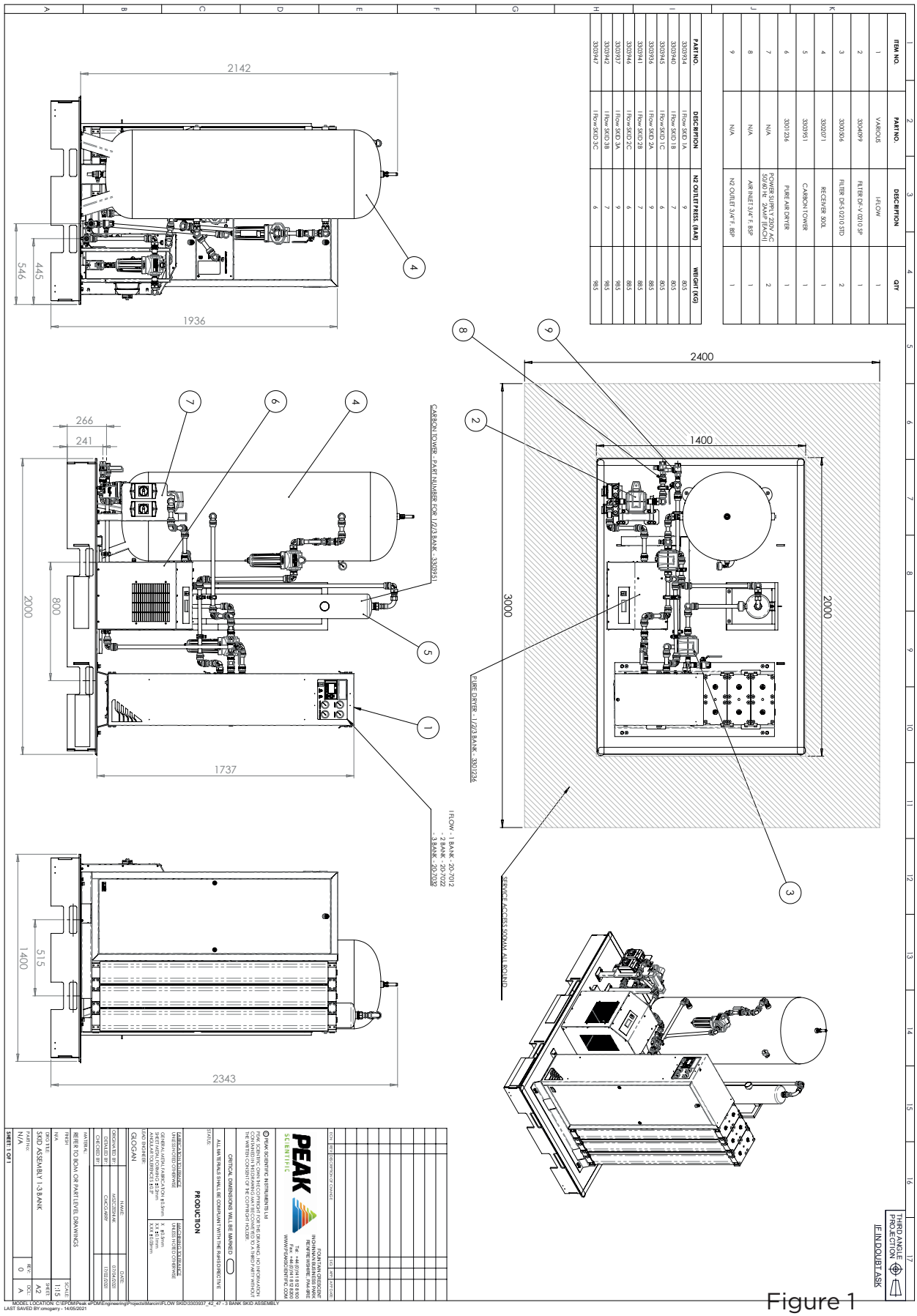


Figure 1

General Construction

i-Flow N2 Select 4 Bank Assembly

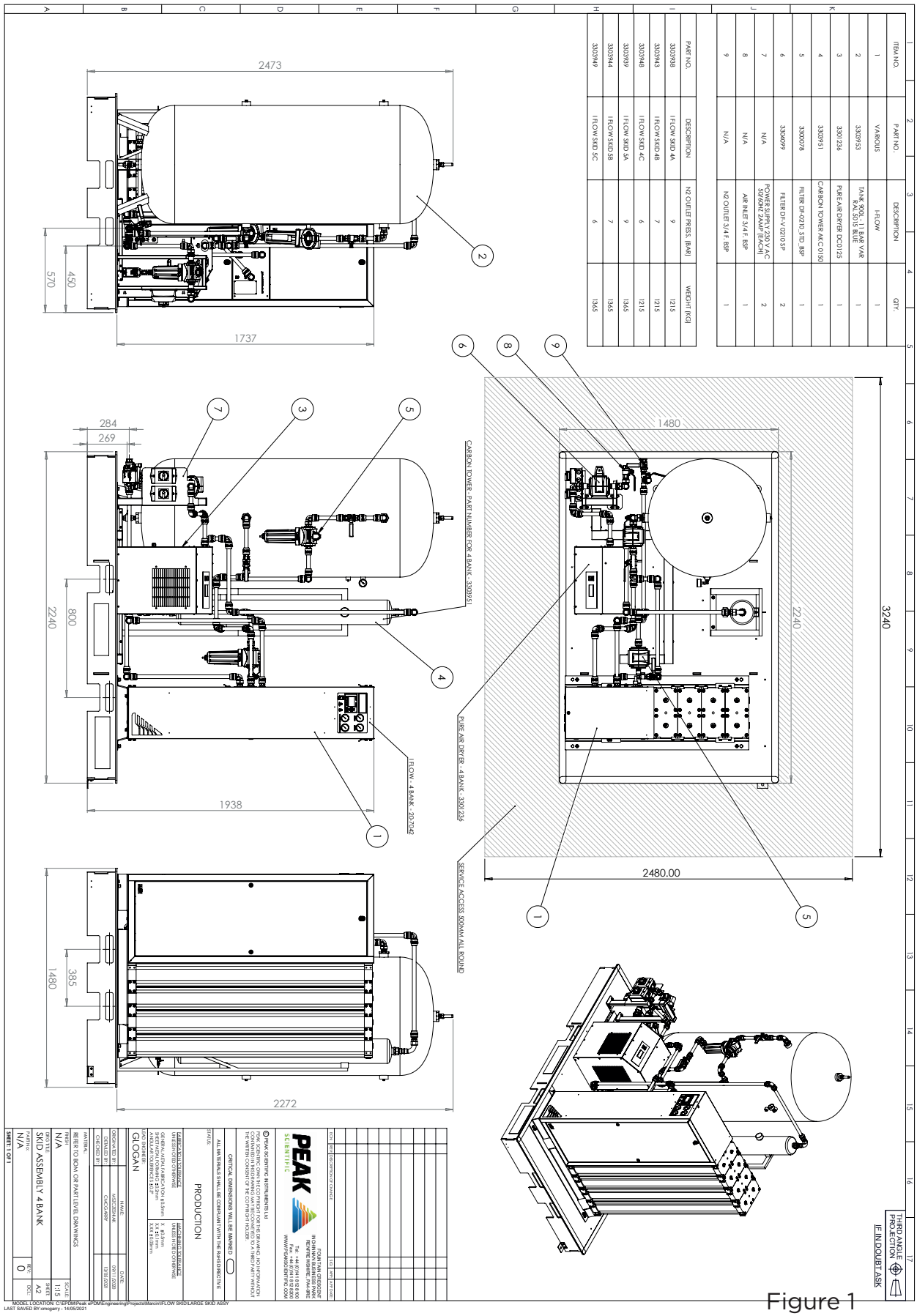
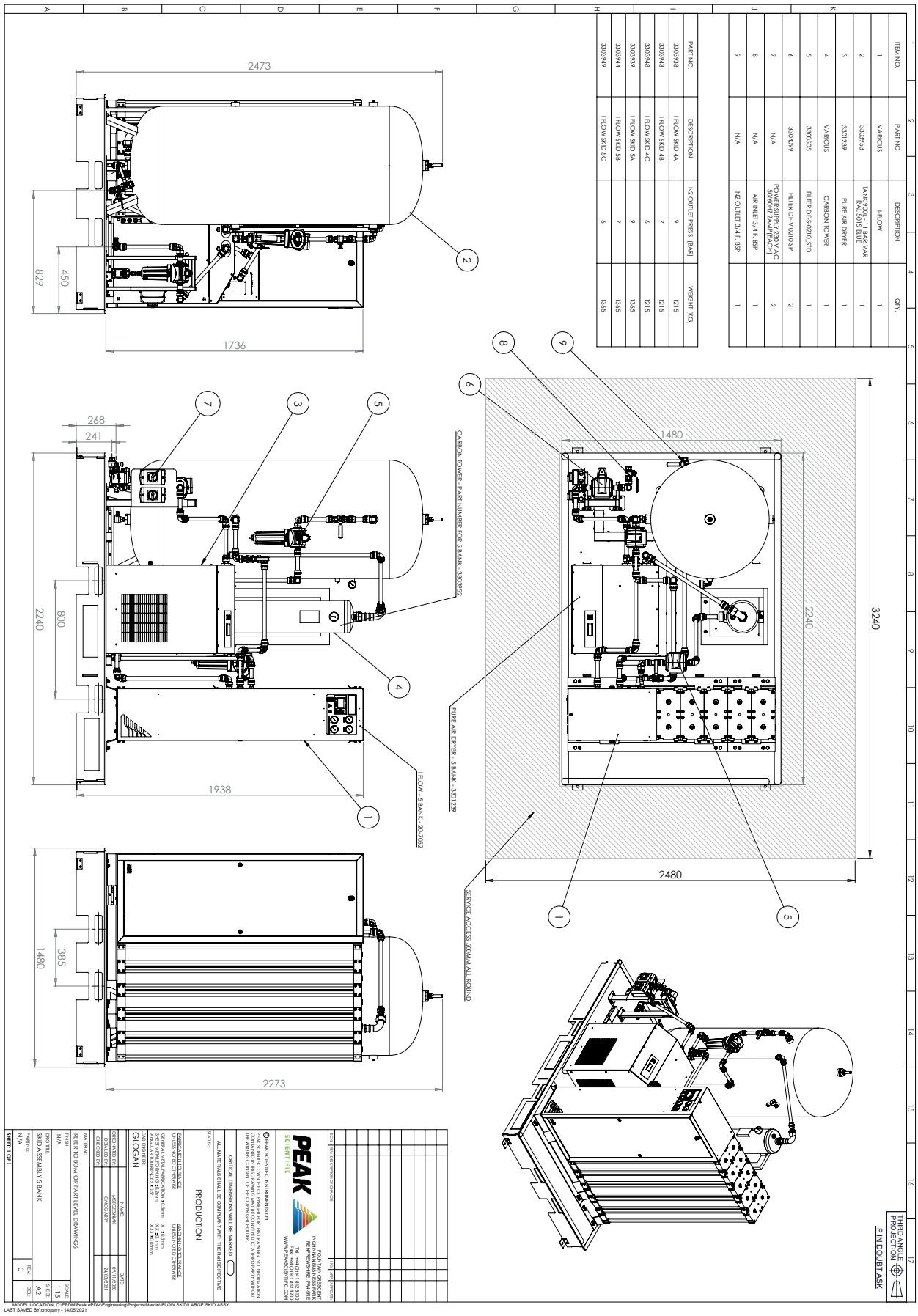


Figure 1

General Construction

i-Flow N2 Select 5 Bank Assembly



Warranties and Liabilities

Warranty & Liability Coverage

1. Peak warrants that, subject to the provisions in this statement, purchased Peak generators, whether purchased directly from Peak or indirectly via an approved, certified and trained distributor or partner (referred to hereafter as a "Peak Partner") will comply in all material respects with any specifications referred to in your customer order confirmation and, subject to installation and operational guidelines being followed as described in applicable product manuals, shall be free from any defects in quality of materials or workmanship for a period of one year from the date of installation, provided this takes place within 3 months of factory dispatch.
2. Where the purchased generator is from the Precision Hydrogen series, Peak further warrants that, subject to installation and operational guidelines being followed as described in applicable product manuals, the hydrogen cell shall be free from any defects in quality of materials or workmanship for a total period of three years (inclusive of warranty period specified in clause 1) from date of installation, provided this takes place within 3 months of factory dispatch.
3. Where the purchased generator is from the i-Flow 6000 series and/or i-Flow skidded solution, Peak further warrants that, subject to installation and operational guidelines being followed as described in applicable product manuals, the generator shall be free from any defects in quality of materials or workmanship for a total period of two years (inclusive of warranty period specified in clause 1) from the date of installation, provided this takes place within 3 months of factory dispatch and the following provisions have also been met:
   a. you must purchase a service plan, ensuring the generator is serviced by Peak or a Peak Partner on or before the end of the first 12 months of your ownership, and serviced at least once during each subsequent 12 month period thereafter;
   b. the generator (and any associated equipment) must have been commissioned by Peak or a Peak Partner;
   c. the feed air or inlet air supply to the generator must comply with the minimum ISO 8573-1:2010 air class, as specified within relevant product user manual, at all times;
   d. your air compressor, dryer, filtration and oil removal systems must be deemed suitable for use by Peak or a Peak Partner, and must be changed and serviced regularly, in line with the equipment manufacturer's recommended guidelines; and
   e. any generator failure or fault that is deemed to have been caused by the failure of any upstream equipment, component, part or system (such as air compressor, air treatment or filtration) will be excluded from the warranty described herein.
4. Peak also warrants that any replacement parts whether purchased (directly from Peak, or via a Peak Partner) or supplied as part of any remedial action undertaken in line with the provisions of clauses 12 and 13, shall be free from any defects in quality of materials or workmanship for a period of 180 days from the date of factory dispatch, provided its installation is performed by Peak or a Peak Partner.
5. This warranty does not exclude Peak's liability in respect of any claim for death or personal injury to any person, in so far as such can be attributed to negligence or breach of duty of care directly resulting from failure of Peak to comply with the provisions in clauses 1, 2, 3 & 4.

Exclusions & Limitations

6. This warranty does not cover:
   a. damage, deterioration or malfunction resulting from an alteration or modification to a generator which has not been carried out by Peak or a Peak Partner;
   b. damage, deterioration or malfunction resulting from what Peak reasonably believes to be abuse, or misuse of a generator by you or any third party;
   c. liability for accident or neglect (other than pursuant to clause 5);
   d. maintenance or repairs which have not been carried out by Peak or a Peak Partner;
   e. operation of a generator or exposure of a generator to environmental conditions that fall out-with operational guidelines as specified in the applicable product user manual; and
   f. lightning, power surges or any other acts of God or nature.
7. This warranty is non-transferrable. Only the original owner of the generator may benefit from the terms within this statement.

8. Peak shall not be liable in respect of any claim made for costs, damages, losses or expenses (whether consequential, direct, indirect or otherwise) or in any respect howsoever arising including, but not limited to, liability from accident or negligence (other than pursuant to clause 5) that may be suffered by you or any third party.
9. No person or entity is authorised to change the terms and conditions outlined in this warranty statement in any respect, or to create any additional obligations or liabilities for any party involved.
10. This warranty statement supersedes any and all prior warranty agreements between the parties and constitutes the complete, final and exclusive understanding of the parties with respect to the subject matter. All prior negotiations, representations, or promises, whether oral or written, of either party shall be deemed to have been merged herein.
11. If any part of this warranty statement is invalidated, for whatever reason, such part will be deleted and the rest shall remain unaffected, continuing to be in full force and effect.

Delivery of Warranty Service

12. Subject to clause 13, and:
    a. Peak being notified by you, within the duration of the applicable warranty period, of any defect that you think is subject to any warranty valid under clauses 1, 2, 3 or 4; and
    b. Peak being permitted to inspect the generators, parts and their installation (along with any relevant packaging)
    Peak shall at its option repair or replace defective generators or parts (including, if necessary, any moving parts and irrespective of runtime). No additional charges will apply, for parts or delivery and, where applicable, labour or travel. Peak will endeavour to deliver this service within 3 working days of your notification.
13. Where, in Peak's reasonable opinion, a defect is subject to an exclusion described in clause 6, Peak reserves the right to charge for parts or delivery and, where applicable, you may also be charged by Peak for call out, labour or travel in respect of any repair or replacement which you authorize Peak to carry out.

Safety Notices

Peak Gas Generation cannot anticipate every possible circumstance which may represent a potential hazard. The warnings detailed within this manual 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 Gas Generation, the user must ensure that the equipment will not be damaged or become hazardous to persons or property.

Symbols

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

 WARNING	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.
 CAUTION	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


WARNING

These instructions must be read thoroughly and understood before installation and operation of your Peak i-Flow 6000 Generator. Use of the Generator in a manner not specified by Peak Gas Generation MAY impair the built in SAFETY features of the equipment.


WARNING

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.


WARNING

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


WARNING

Nitrogen is not a poisonous gas, but if its concentration in breathed air becomes too high, there will be a risk of asphyxiation. Ensure that adequate ventilation is provided for the surrounding area, (depending on the operating specification and model selected the generator can produce up to a maximum nitrogen flow of 635 L/min)

UK Declaration of Conformity

We Peak Scientific Instruments Ltd.

Of Fountain Crescent, Inchinnan, Renfrewshire, PA4 9RE

Hereby declare that, this declaration of conformity is issued under the sole responsibility of the manufacturer.:

Equipment Type: Nitrogen Generator

Model Designator: I-flow 6000 N2 Select skid assy

To which this declaration relates, is in conformity with the following applicable UK Statutory Instruments, Standards and other normative requirements.

- **The Electrical Equipment (Safety) Regulations 2016 (SI 2016 / 1101) as amended.** BS61010-1:2010 Safety Requirements for Electrical Equipment for Measurement Control and Laboratory Use.
- **The Electromagnetic Compatibility Regulations 2016 (SI 2016 / 1091) as amended.** BS61326-1:2013 Electrical Equipment for Measurement , Control and Laboratory Use – EMC Requirements.
- **The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (SI 2012 / 3032) as amended.**

Signed for and on behalf of Peak Scientific by

Signed: 

Name: Fraser Dunn

Position: Design Engineering Manager
Peak Scientific Instruments ltd,
Inchinnan, Renfrew, Scotland, PA4 9RE, UK.

Date: 2nd June 2021

UK CA

EU Declaration of Conformity

We Peak Scientific Instruments Ltd.

Of Fountain Crescent, Inchinnan, Renfrewshire, PA4 9RE

Hereby declare that, this declaration of conformity is issued under the sole responsibility of the manufacturer.:

Equipment Type: Nitrogen Generator

Model Designator: I-flow 6000 N2 Select skid assy

To which this declaration relates, is in conformity with the following applicable EU Directives, harmonized standards, and other normative requirements.

- **Low Voltage Directive 2014/35/EU**
  EN 61010-1: 2010 Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use.
- **Electromagnetic Compatibility Directive 2014/30/EU**
  EN 61326-1: 2013 Electrical Equipment for Measurement, Control and Laboratory Use – EMC Requirements.
- **Restriction on the use of certain hazardous substances in electronic equipment (RoHS) Directive 2011/65/EU as amended by EU 2015/863.**
- **FCC 47 CFR Part 15 class B**
  Unintentional radiators; Conducted and Radiated emissions limits.

Signed for and on behalf of Peak Scientific by

Signed: 

Name: Fraser Dunn

Position: Design Engineering Manager
Peak Scientific Instruments ltd,
Inchinnan, Renfrew, Scotland, PA4 9RE, UK.

Date: 2nd June 2021

WEEE Compliance Statement

The Waste Electrical and Electronic Equipment (WEEE) Regulations SI 2013 No 3113 and or the Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EU apply to all electrical and electronic equipment placed on the market in the UK and EU covered by the scope of regulations which can be found in the Government Guidance Notes (PDF) produced by the Department for Business Innovation and skills for the UK and here for Europe.

All PEAK products that are subject to the WEEE directive are compliant with the WEEE marking requirement. Such products are marked with the “crossed-out wheelie bin” symbol (shown below) in accordance with European standard EN50419. All old electrical equipment can be recycled. Please do not dispose of any electrical equipment (including those marked with this symbol) in general rubbish bins. Please contact your dealer or distributor for clarity.

Technical Specification

Environment

Minimum Operating Ambient Temperature	+5°C (41°F)
Maximum Operating Ambient Temperature	+50°C (122°F)
Maximum Altitude	2000m
Maximum Relative Humidity	80% non-condensing
Minimum Storage Temperature	-20°C (-4°F)
Maximum Storage Temperature	+60°C (140°F)

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

Required Inlet Air Pressure	145 / 116 /101 psig (10 / 8 / 7 barg)*
Maximum Inlet Air Pressure	145 psig (10 barg)
Minimum Inlet Flow	Varies depending on model & configuration
Maximum Outlet Pressure	131 / 101 / 87 psig (9 / 7 / 6 barg)*
Maximum Outlet Flow	Varies depending on model & configuration
N_2 Purity	>99.9%

Electrical Requirements

Voltage	230 VAC ±10%
Frequency	50/60 Hz
Current (i-Flow)	2 A
Current (Dryer / Filtration)	2 A
Pollution degree	2
Installation category	Class II

General

Skid Model	1	2	3	4	5
Dimensions mm (inches) W x D x H	2000 x 1400 x 2343 mm (78.7 x 55.1 x 92.3 inches)			2240 x 1480 x 2460 mm (88.2 x 58.3 x 96.6 inches)	
Shipping weight kg(lbs)	805 (1775)	885 (1951)	985 (2172)	1215 (2677)	1365 (3009)

Installation

System Environment

CAUTION

The i-Flow N2 Select skidded system is movable by forklift using the 2 upper slots on the long edge shown below.

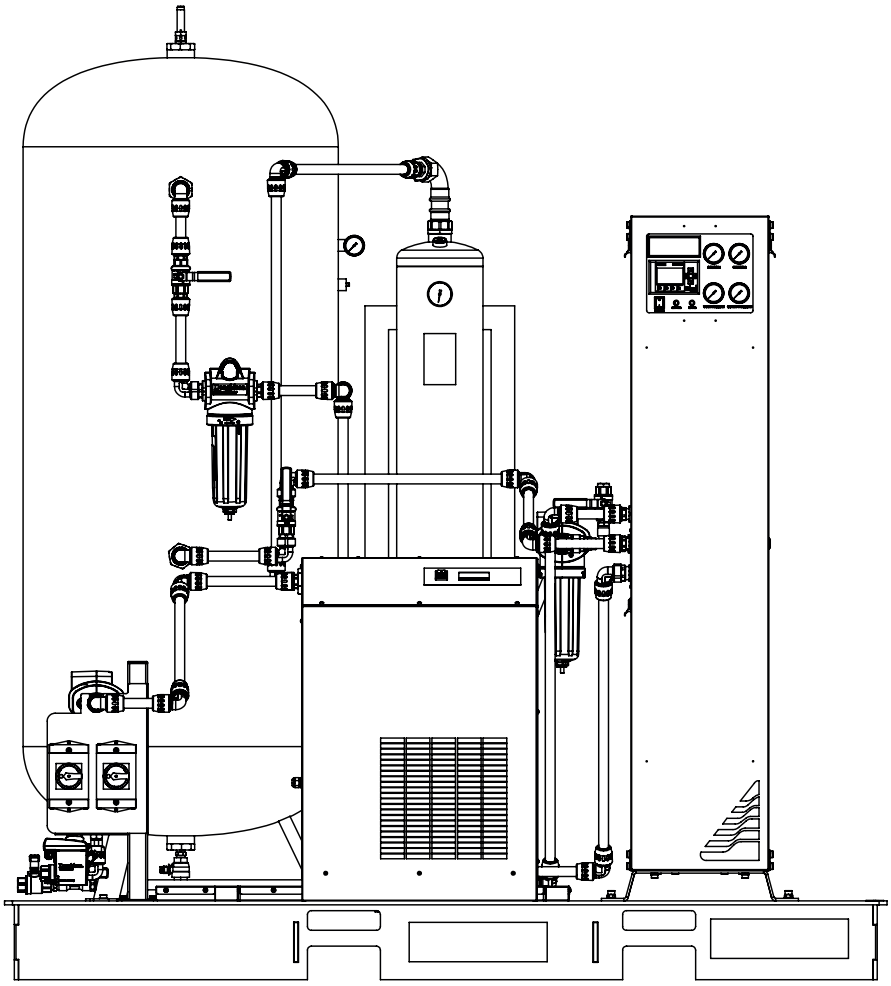


Figure 1

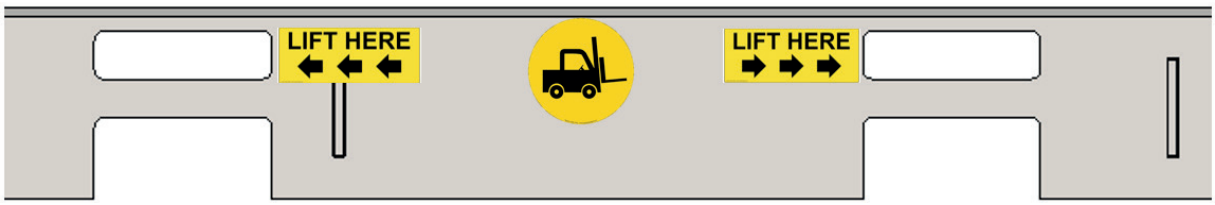


Figure 2

Care must be taken when lifting due to the un-even weight distribution of the individual component parts. The forklift slots are 800mm (long edge) apart, and as such will require a forklift with the appropriate fork span and lifting capacity. The lower slots on the short edge are only intended to adjust the final position of the skid (i.e. shuffling the skid into exact position once lowered from the forklift) and are not to be used for full lifting of the skid. Ensure appropriate power supply and compressed air supply are available at installation location.

The system is designed for indoor use only but can also be housed in a suitable, weatherproof enclosure, provided the environmental parameters meet operational specifications detailed in this manual. The system should always be positioned in such a way that it can be easily switched off and commissioning valves can be accessed easily.

WARNING

Ensure a gap of at least 500mm is allowed around the skid system to allow for air flow and accessibility.

System Positioning

Once in place, we recommend that the skid system is be bolted in place using the 8mm thick L-brackets which have 16mm pre-drilled holes in them & we recommend using M12 securing bolts. Always ensure that the system is installed by a Peak approved & qualified technician.

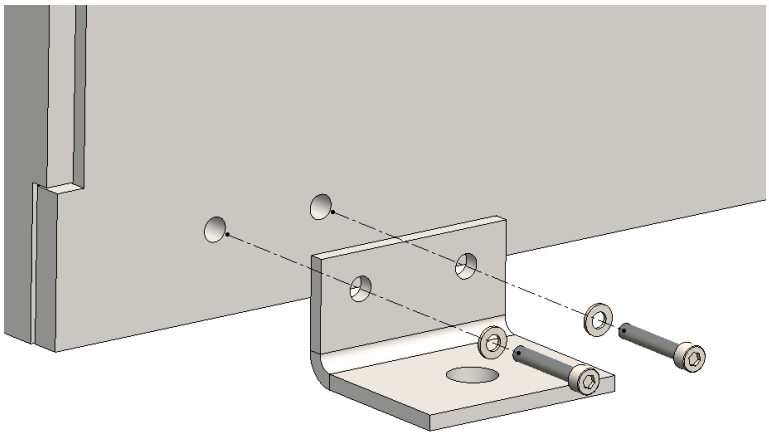


Figure 3

Rawl Bolt Installation

1. Drill a hole of required diameter and depth.
2. Remove debris and thoroughly clean hole with brush and pump.
3. Insert anchor through fixture into hole and tap until required installation depth is achieved.
4. Tighten to the recommended torque.

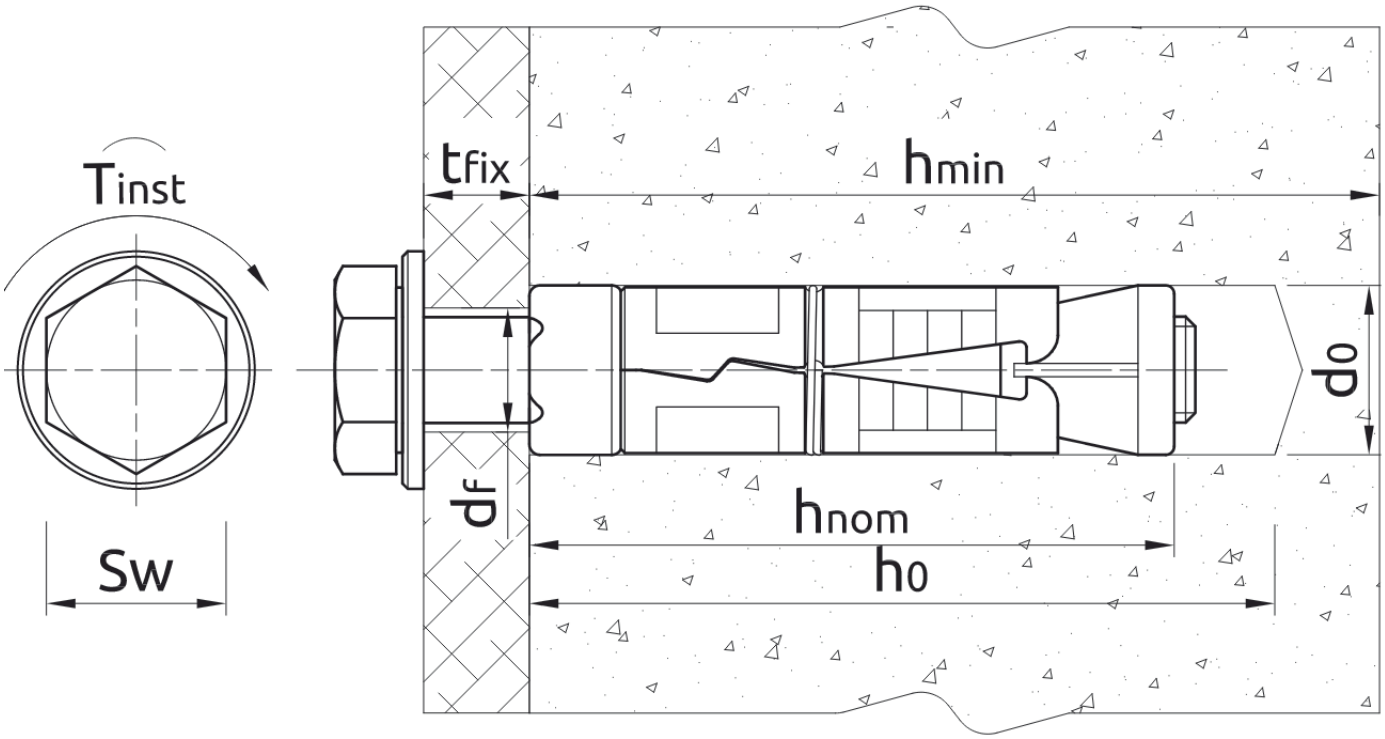


Figure 4

Rawl Bolt Data Table 1

Size			M12
Thread Diameter	d	[mm]	12
Hole Diameter in Substrate	d_0	[mm]	18
Installation Torque	T_{inst}	[Nm]	80
Min. Hole Depth in Substrate	h_0	[mm]	85
Installation Depth	h_{nom}	[mm]	75
Min. Substrate Thickness	h_{min}	[mm]	130
Min. Spacing	s_{min}	[mm]	80
Min. Edge Distance	c_{min}	[mm]	90

System Connections

Both inlet & outlet connections are 3/4” BSPF and positioned in front left corner of skid assembly, next to power isolation switches. For more information, please refer to General Construction diagrams.

Ensure outlet is connected to the correct application

Connections should only be carried out by a trained professional.

Electrical Connection

Connect the system to an appropriate 230-volt single-phase supply. Ensure appropriate circuit breakers (2 amp – C-Curve for both the i-Flow and refrigerant dryer/ filtration) are used at the distribution panel to serve as a disconnect device. The disconnect device must be clearly marked, easily accessible and as close to the system as possible. Refer to the system serial plate for input specification and ensure your supply matches the requirements.

Ensure that mains supply cable has an adequate rating (3 core, 1.5mm^2, H05VV-F, 500v). Failure to do so could cause damage to the system.

WARNING

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.

EARTH/GROUND (E):-	Green & Yellow	or	Green
LIVE (L):-	Brown	or	Black
Neutral (N):-	Blue	or	White

Electrical requirements are 230VAC nominal +/- 10%, however, running continuously at voltages out with this is not recommended. Extended periods at extremes can have a detrimental effect on the operation and life of the generator.

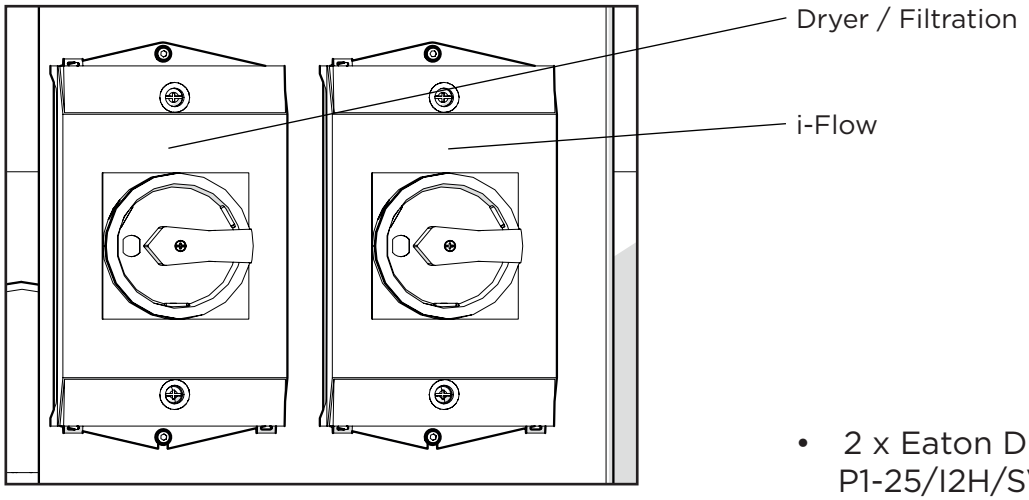


Figure 6

- 2 x Eaton Disconnects P1-25/I2H/SVB-SW/HI11
- 230V 50/60 Hz Mains Supply

WARNING

Connections should only be carried out by a trained professional.

WARNING

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

Commissioning & Safe Start-Up Sequence

This procedure must be followed to ensure the nitrogen generation system is operating correctly and in a safe state. It is mandatory that this procedure be followed after any service operation has been carried out.

All servicing and repair must be carried out by Peak Gas Generation or an authorised Peak partner.

After servicing and restart of the system, the tanks should build pressure to the factory set value (visible on external pressure gauges) and the i-Flow and Air Dryer should initialise as per their respective user manuals, showing no errors or warnings.

NOTE: Where the below instructions make reference to the i-Flow Nitrogen Generator or the Refrigerant Dryer, please refer to the individual User Manual documents (separate, but included with system) provided.

With reference to Pneumatic diagram (Figure 7):

1. Once the Generator has been installed, ensure all valves (1-7) are shut, DO NOT Switch on the power to the i-Flow Generator immediately. First Switch on the Air Dryer (note: this includes power to all Air Filtration equipment). Remove the blank plug from and open valve
2. Partially & slowly open the Air supply valve (1), to allow the inlet compressed air to vent & purge any remaining moisture from the newly installed pipework & equipment.
3. After 5-10 minutes shut valve (2) replacing the blank plug and slowly fully open valve (1). This will introduce the compressed air supply up to the i-Flow Generator inlet. At this point valve (1) should be open and valves (2-7) should all be in the closed position. The Inlet pressure will be indicated on the Carbon Tower gauge.
4. Open Valves (3) & (4) to put the N2 Process Tank online to the i-Flow Generator.
5. The power to the i-Flow generator can now be turned on. On first start up, air will be introduced to Column 1 and the front panel gauge will slowly start to rise. The front panel display will have an orange background and show a message “BYPASS ACTIVE” “HIGH OXYGEN”. During this period, the i-Flow Generator will begin to cycle and will automatically vent poor quality gas internally through the built in Bypass feature. Normal cycle is as follows: Column 1 gauge will start to rise in pressure, after approx. 40 seconds the Columns will briefly “EQUALIZE” and the pressure on Column 1 and 2 gauges should level out. Column1 will then vent rapidly to zero and Column 2 will continue to rise slowly. During this process, the TANK pressure gauge should continue to slowly rise.
6. Allow the N2 Process Tank to reach pressure and stabilise (timing will vary depending on the starting contents of the process tank). From first start-up with air in the tank, it is likely to take 8 to 10 hours to purge the oxygen to an acceptable level. The actual oxygen content (in parts per million) is displayed on the front panel screen. Once the oxygen content drops below the required level, the system will automatically exit BYPASS mode.. The front panel screen will remain with an orange background for 24hrs from first power on, and during this time all pressure and purity alarms are disabled.

7. The Generator has been pre-set in the factory to give the specified output flowrate and pressure. Failure to achieve the factory specification after maintenance may be as a result of an incorrect service procedure, so please review any maintenance carried out. If still unable to achieve the specification, please contact Peak Gas Generation for further assistance.
8. Once the N2 Process Tank has stabilised and the generator has exited BYPASS mode, then remove the blank plug from valve (5) and open valve (5), with valve (6) remaining closed for a period of 5 to 10 minutes to purge the line.
9. Once the line has been purged, close valve (5) and replace the blank plug. The System is now ready for use and valve (5) can be opened to the application.

The System is now ready for use.

Once installed and commissioned, as described above the design of the gas generator is that it will deliver up to your specific output pressure and flowrate of Nitrogen. Should the demand for Nitrogen be less than the rated output flow, or indeed should the demand stop, the generator will automatically go into 'Standby Mode' and the front panel LED will illuminate. In Standby Mode, the changeover of the columns is suspended which will stop the consumption of inlet compressed air. The control system will automatically detect when the demand for Nitrogen resumes and the generator will start to produce gas again. DO NOT turn off the power to the i-Flow or the Air Dryer without following the Shutdown procedure detailed below. Normal operation is to leave the i-Flow and Dryer with Power ON and compressed Air Supply ON.

Connecting to the application

Once the initial purge run of approximately 8 hours has completed (required to reach purity for the application), it is ready to be connected to the application(s).

Once the Skid system is connected to the application, please ensure that it is thoroughly checked for being leak-tight. Even the slightest leak in the gas supply between the system and the application can lead to a reduction in efficiency.

Normal Operation

The system is designed specifically to minimise operator involvement. Given that the system is installed as described in earlier sections and is serviced in accordance with the specified maintenance recommendations (see service requirements), then it should simply be a matter of turning the system on.

The system will automatically produce the factory set flow and pressure as detailed in the Technical Specifications.

On Demand Gas

The system produces gas on demand. If the application is operating and requires a gas flow, the generator will supply this to suit the requirements of the application. If the application requirement for gas stops, the system will also stop once it has reached its upper limit in the process tank. If the demand from the application starts again, the system will detect the demand for gas and will automatically start again to suit demand.

Unusual Operation

If at any time the system begins to emit excessive noise or vibration, then it should be switched off and you should contact Peak Gas Generation or the Peak partner from which the Skid system has been purchased. If an audible alarm is heard from the Refrigerant Dryer, this is just to indicate that the internal condensate auto-drain requires servicing. And as such, you should contact Peak Gas Generation or the Peak partner from which the Skid system has been purchased.

Safe Isolation Process

As described above the system is designed to have mains power and compressed air supply ON once commissioned. However, there will be times when you must isolate the system to move, or maintain equipment, in this case the procedure below should be followed, referring to Pneumatic System diagram (Figure 7).

To Isolate the Gas supply to allow work on the application:

1. Close valve (6). This prevents any N2 gas from leaving the system. Allow the i-Flow control system to operate normally. It will detect there is no demand for N2 gas and will put the i-Flow and Dryer into a standby mode.
2. Pressure should be vented downstream of Valve (6) to allow work to be carried out safely.
3. Once work is complete open Valve (6) slowly to reconnect the N2 Supply.

To Isolate the system for Service & Maintenance:

1. Close valves (6) and (1). Then close valves (3) and (4).
2. Turn the mains power OFF to the Air Dryer /Filtration & i-Flow Generator unit.
3. Remove the blank plug from and Open Vent valves (2) and (5), allowing the line pressure to dissipate.
4. Open the service panel to the i-Flow Generator and discharge the residual generator pressure via the top of the safety relief valve (NOTE: this is an unscrew mechanism, so tools should not be required to operate).
5. Allow 30 minutes for the pressure to fully dissipate and leave vent valves open for the duration of the service work. (NOTE: Once work has been completed close the safety valve in generator, close vent valves (2) & (5), replace blank plugs, then reopen valves (3), (4), (6) & (1) - then you can turn on mains power again & restart the system).

To Isolate the system to move to a new location:

1. Close valve (6) and (1).
2. Turn the mains power OFF to the Air Dryer /Filtration & i-Flow Generator unit.
3. Open drain valve (7) at the bottom of the N2 Process Tank, allowing the pressure to dissipate from the tank.
4. After 30 minutes remove the blank plug from and open valves (2) and (5) to ensure line pressure has dissipated.
5. Leave the drain/vent valves open for the duration of the service work / transport (NOTE: Closing the drain/vent valves may result in slight pressure build up from the natural venting process of the carbon sieve in the i-Flow Generator unit).

Once planned service, maintenance or relocation have been completed the system can be re-connected to the mains supply and the Commissioning / Start-up process described earlier should be repeated.

Pneumatic Diagram

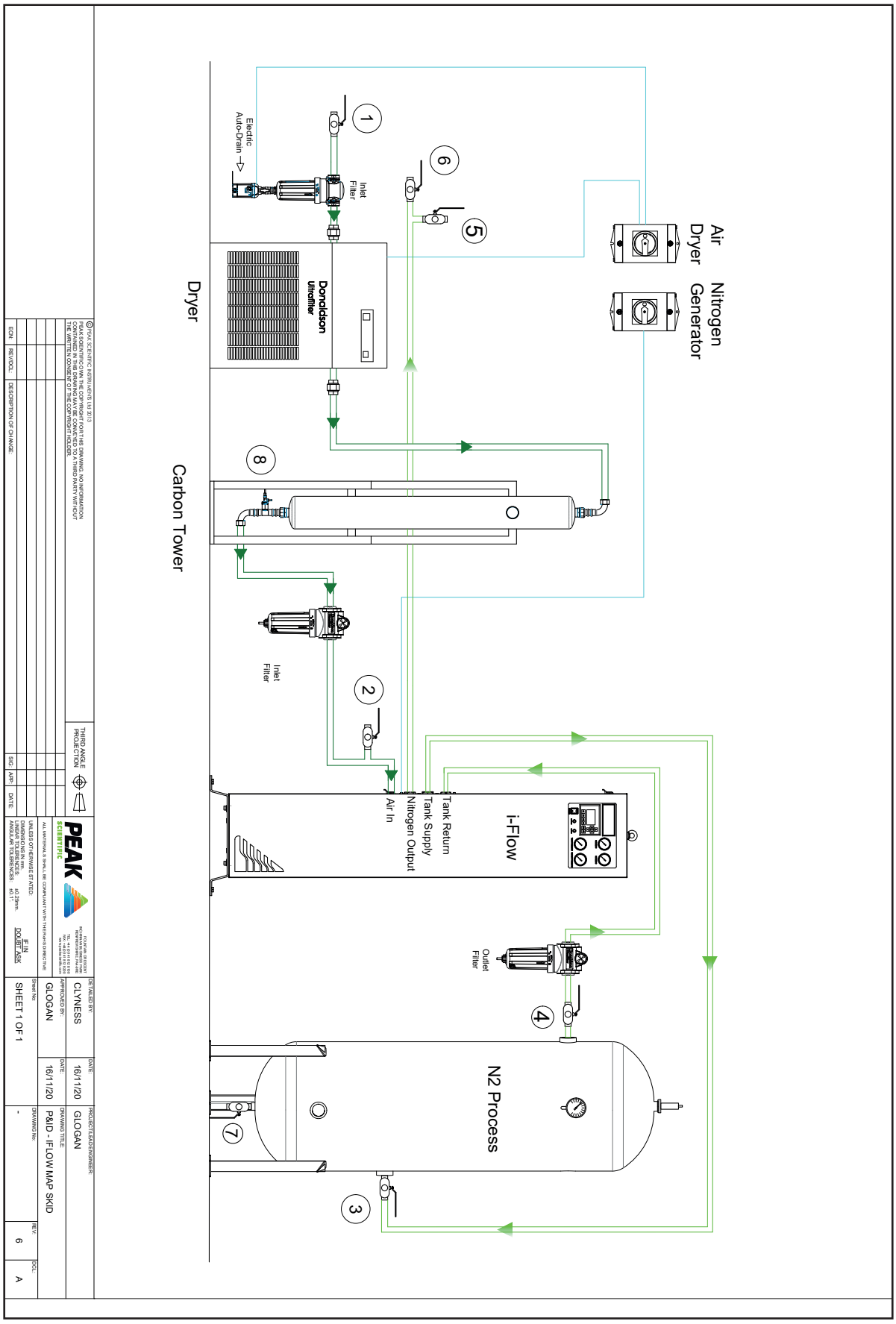


Figure 7

Wiring Diagram

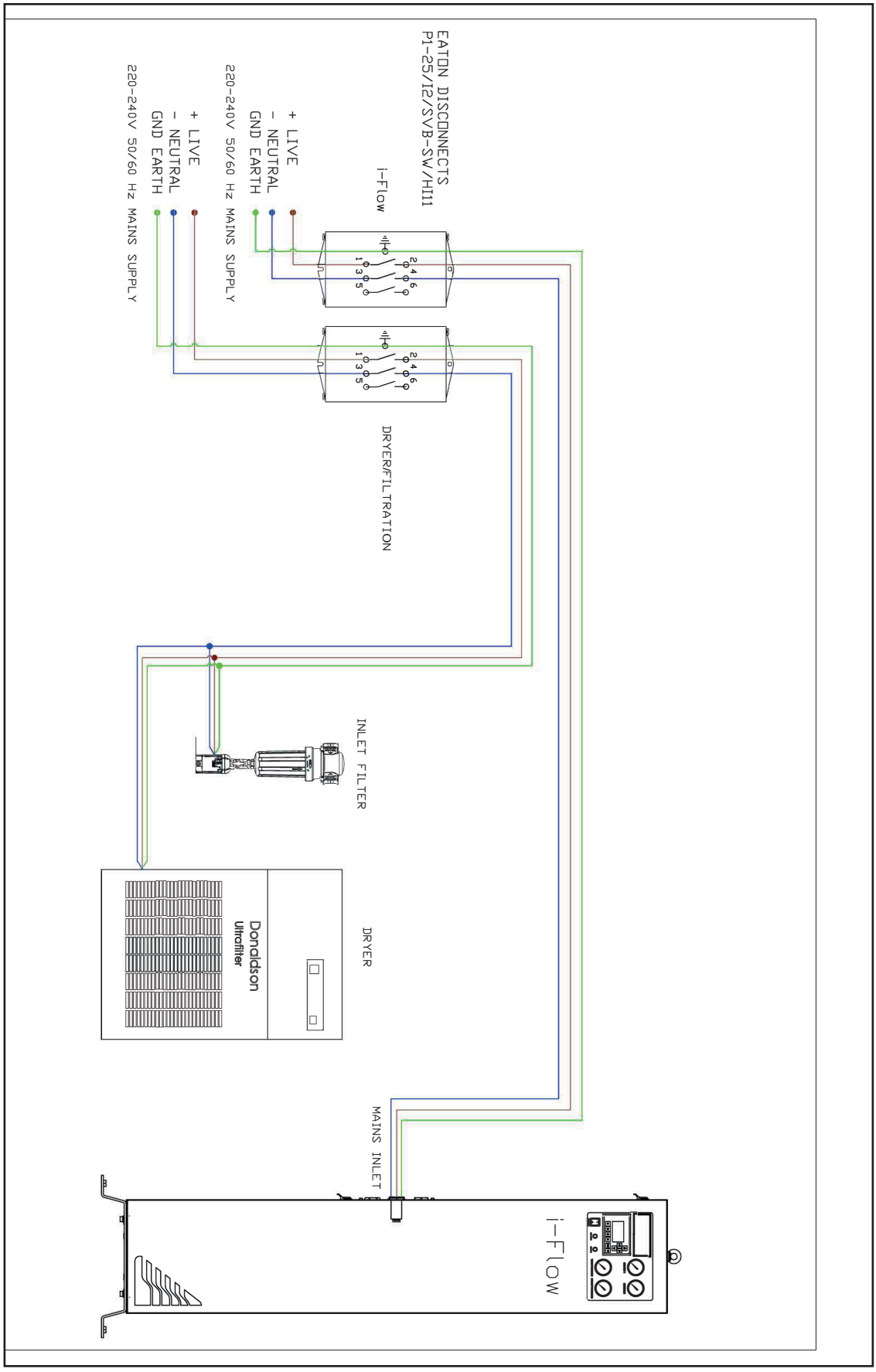


Figure 8

Service Requirements

Service Schedule

Purchase Interval	Component	Part No.	Quantity.
Annual*	Service Kit i-Flow N2 601X To 605X	08-0318	1
	Filter Element V 0210	3304156	1
	Service Kit - Condensate Drain D03	3300085	1
	Service Kit A - BURAN DC 0125	3304157	1
	Service Kit A - BURAN DC 0225	3304158	1
	Service Kit AKC 0150	3304160	1
	Service Kit AKC 0175	3304161	1
	Filter Element S 0210	3301192	2
	Service Kit - Condensate Drain KA 1/2	3301528	2
Every 4 years	Oxygen Analyser & Sensor 24Vdc 0-1000ppm	04-4572	1

* Please note, service kits required & selection will depend on skid model you have. Please quote your system serial number when requesting quote and our technical support specialists will assist in providing the correct items.

Peak Protected

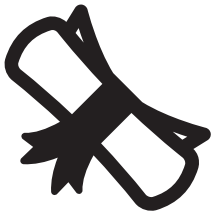
With Peak Gas Generation you invest in not only a product but peace of mind. With a network of certified Peak engineers stationed throughout the globe, Peak's rapid response team are never far away and our commitment is to keep your generator running day in, day out, protecting your productivity.

[Peak Protected] can provide...

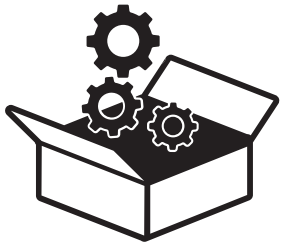
Installation
A dedicated Peak engineer will visit your site to install and setup your generator

Complete plan
Swift response by a Peak Service Engineer within 72 hours & planned preventative maintenance

Premium Protected
Guaranteed rapid on-site response within 24 hours & planned preventative maintenance



IQ/OQ
Certified assurance for applications requiring documented qualification



Spares
Genuine Peak parts with express delivery, ensuring optimal performance and lifetime

Technical Support Hotline
Around the clock support by phone or online with our global technical helpdesk

To find out more about protecting your investment visit: **www.peakgas.com/support/peak-protected**

Cleaning

For cleaning instructions specific to the i-Flow and Refrigerant dryer, please refer to the respective User Manuals provided with this system. Clean the outside of the system only using warm soapy water and a clean damp cloth. Ensure the cloth is thoroughly rung out to remove excess fluid prior to use. Do not use decontamination or cleaning agents that could cause a HAZARD as a result of a reaction with parts of the Generator or material contained within it. If there is any doubt about the compatibility of decontamination or cleaning agents, please contact your Peak Gas Generation representative.

Cleaning should only be undertaken with the power switched off and the power cord removed from the rear of the generator.

Under no circumstances should any solvents or abrasive cleaning solutions be used as these can contain fumes that could be harmful to the generator.

Care should be taken with Leak Detections Liquids.

Go Online or Complete and Return

We know that registering any of your recently purchased products is not the first thing on your mind- but it is very important to both of us. Not all warranties are alike and Peak Gas Generation stand out against other gas suppliers as we offer a comprehensive, quick response, on-site warranty. This means that in the very unlikely case that your gas develops a fault we have rapid support teams on-hand around the world who are able to come to your lab and get you back up and running in no time.

Register for your **comprehensive 12 month on-site warranty** with ease online at www.peakscientific.com/protected.

Alternatively, you can send the completed form to Peak Gas Generation 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/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	
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

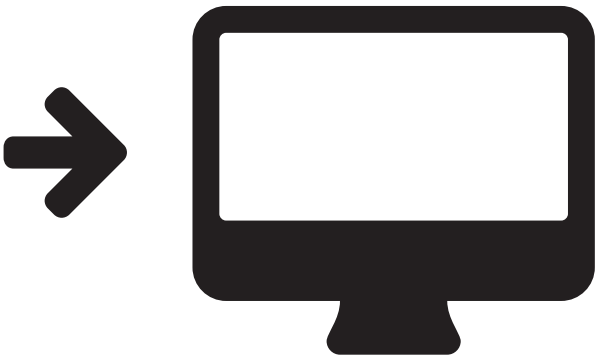
Extend your cover with

Peak Scientific offer comprehensive gas 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 , you must notify Peak Scientific immediately by emailing warranty@peakscientific.com. For s 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



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[PEAK Protected]™

Peak Gas Generation gas generators define the benchmark in reliability, convenience and performance in facilities around the world, and come backed by a 12 month on-site warranty. Beyond this period however you can ensure that your investment continues to be **[Protected]** by our comprehensive generator care cover.

Our world-class aftercare support packages deliver a program of scheduled preventative maintenance whilst giving you the reassurance of instant access to worldwide technical support and priority on-site response in the untimely event of a breakdown.

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For further information on any of our generator products please contact **contact@peakgas.com**

i-Flow N2 Select Skid User Manual Rev 1 RSID 4145 EN 10/06/21

PEAK GAS GENERATION