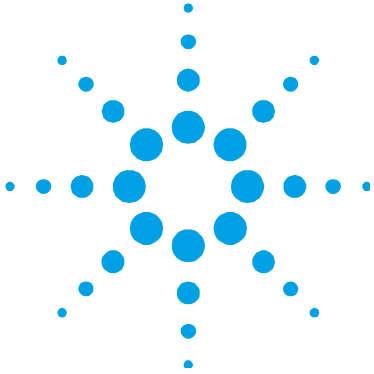

Cryopanel

Model
919-0180

Manuale di Istruzioni
Bedienungshandbuch
Notice de Mode D'Emploi
User Manual

87-900-078-01 (E)
05/2011

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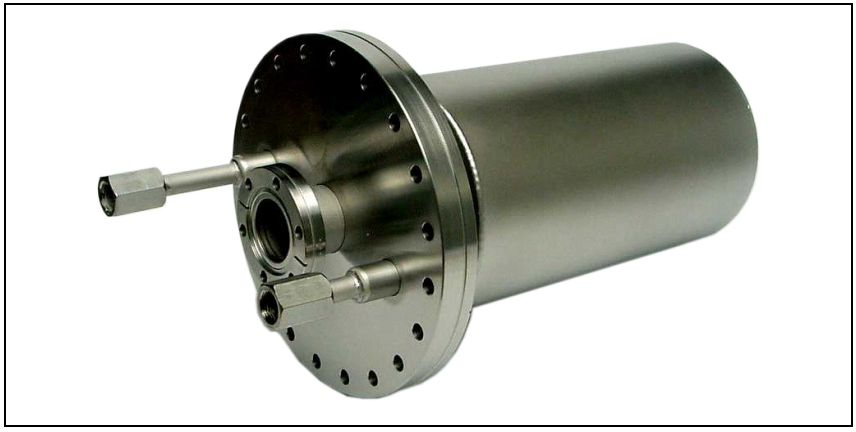
WARNING

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

Cryopanel



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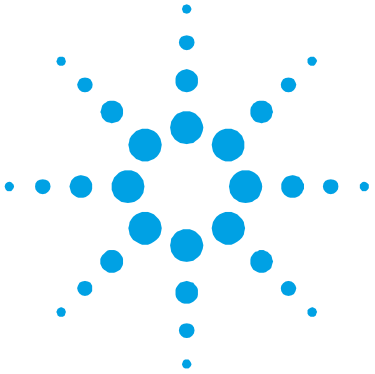


1
Procedura per l'installazione

Traduzione delle istruzioni originali

Informazioni generali

Questa apparecchiatura è destinata ad uso professionale. L'utilizzatore deve leggere attentamente il presente manuale di istruzioni ed ogni altra informazione addizionale fornita dalla Agilent prima dell'utilizzo dell'apparecchiatura. La Agilent si ritiene sollevata da eventuali responsabilità dovute all'inosservanza totale o parziale delle istruzioni, ad uso improprio da parte di personale non addestrato, ad interventi non autorizzati o ad uso contrario alle normative nazionali specifiche.

Questo manuale utilizza le seguenti convenzioni:

AVVERTENZA! **I messaggi di avvertenza attirano l'attenzione dell'operatore su una procedura o una pratica specifica che, se non eseguita in modo corretto, potrebbe provocare gravi lesioni personali.**

ATTENZIONE! I messaggi di attenzione sono visualizzati prima di procedure che, se non osservate, potrebbero causare danni all'apparecchiatura.

NOTA Le note contengono informazioni importanti estrapolate dal testo.

Generalitá sul TSP Cryopanel Assy

Il TSP Cryopanel è stato progettato per essere uti-lizzato in accoppiamento con la TSP (Titanium Sublimation Pump), tramite montaggio su una flangia 8" OD ConFlat®. Per il raffreddamento può essere utilizzata acqua o azoto liquido. Inoltre il sistema può funzionare in modalità UHV senza raffredda-mento. Il Cryopanel può essere installato su pompe ioniche doubleended o sideported.

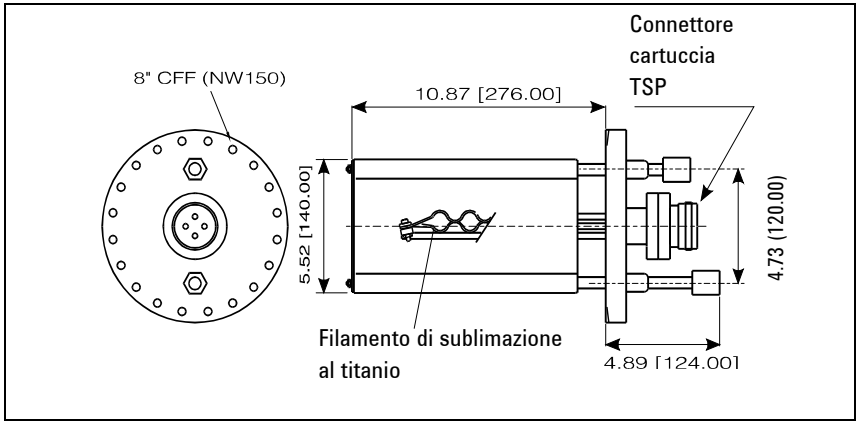


Figura 1 Ingombri TSP Cryopanel in mm [pollici]

Specifiche Tecniche

Tab. 1

	N_2	H_2	H_2O
Velocità di pompaggio a 20 °C con TSP e raffreddamento ad acqua (l/s)	516	1205	578
Velocità di pompaggio a -195 °C con TSP e raffreddamento ad LN_2 (l/s)	555	1760	696*
Superficie di pompaggio interna (cm^2)		826	
Flangia principale		8" CF (NW 150)	
Vol. del serbatoio (litri)		1.8	
Raccordi di raffreddamento		3/8" Gas	
Flangia sorgente al titanio		2¾ CF	

* Tenendo presente che H2O è un fluido condensabile, l'effetto del pompaggio sulla superficie di uscita del cryopanel è compreso. La velocità di pompaggio è 12.000 l/sec.

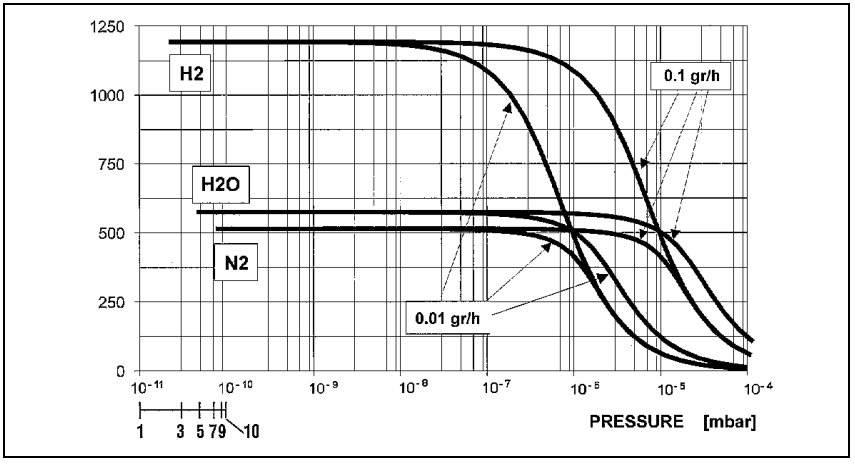


Figura 2 Velocità di pompaggio a 20 °C con TSP e raffreddamento ad acqua

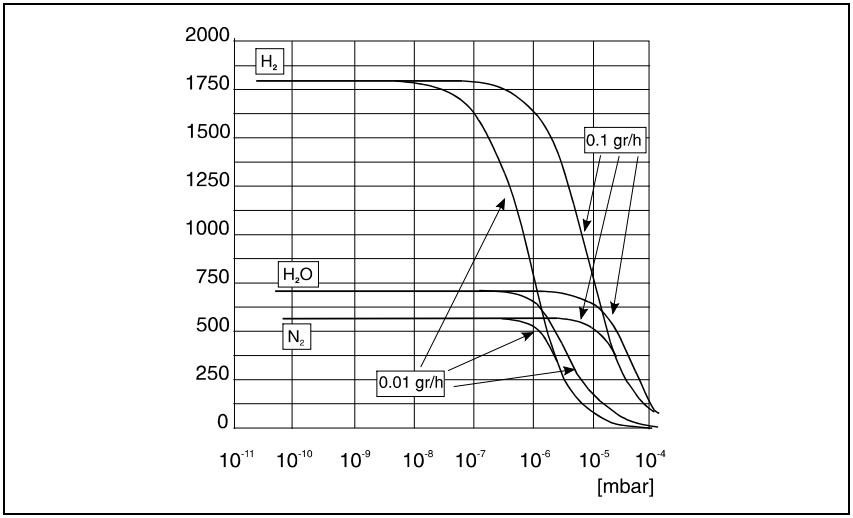


Figura 3 Velocità di pompaggio a -195 °C con TSP e raffreddamento ad azoto liquido

Installazione del TSP Cryopanel

AVVERTENZA!

Se per il raffreddamento viene utilizzato LN_2, prestare molta attenzione nel maneggiare il TSP Cryopanel durante le fasi d'installazione, in quanto il contatto del LN_2 con la pelle provoca gravi ustioni.

Per eseguire una corretta installazione del TSP Cryopanel, attenersi fedelmente alla procedura riportata di seguito.

1. Pulire accuratamente sia la flangia da 8" ConFlat® del Cryopanel, che la relativa flangia presente sulla pompa.
2. Posizionare i dadi ed avvitare ciascuno con una coppia da 6 – 11 Nm (4.5 - 8 ft.-lbs). Dopo aver avvitato un dado, avvitare sempre quello dalla parte opposta rispetto al centro della flangia.

3 Ripetere questa sequenza di avvitamento per altri due cicli.

4 Continuare ad avvitare i dadi fino a che i lati delle flange si accostano e fino a rilevare un incremento di coppia.

5 Fissare i condotti del fluido di raffreddamento ai relativi attacchi presenti sul TSP Cryopanel, avendo cura di stringere in modo adeguato i dadi di bloccaggio.

Installazione della Cartuccia TSP

Normalmente la cartuccia TSP viene fornita con una flangia OD 2¾" ConFlat® con tre filamenti al titanio-molibdeno; ciascuno bakeable (riscaldabile) a 400 °C. La sublimazione massima si ottiene con l'erogazione di 300 W di potenza.

Per il fissaggio della cartuccia sul Cryopanel, procedere come descritto nel paragrafo precedente, facendo attenzione a fissare la flangia in modo tale da non creare interferenze tra il connettore del cavo proveniente dall'unità di controllo ed i condotti di raffredamento.

NOTA Durante la fase d'installazione, occorre rispettare il verso di circolazione del fluido di raffreddamento, come riportato negli esempi seguenti.

ATTENZIONE! Prestare attenzione in fase di rimozione ai liquidi di raffreddamento dal Cryopanel prima del baking e tenere aperto il collegamento del tubo di raffreddamento durante il baking.

Le figure riportano alcuni esempi di posizionamento del TSP Cryopanel.

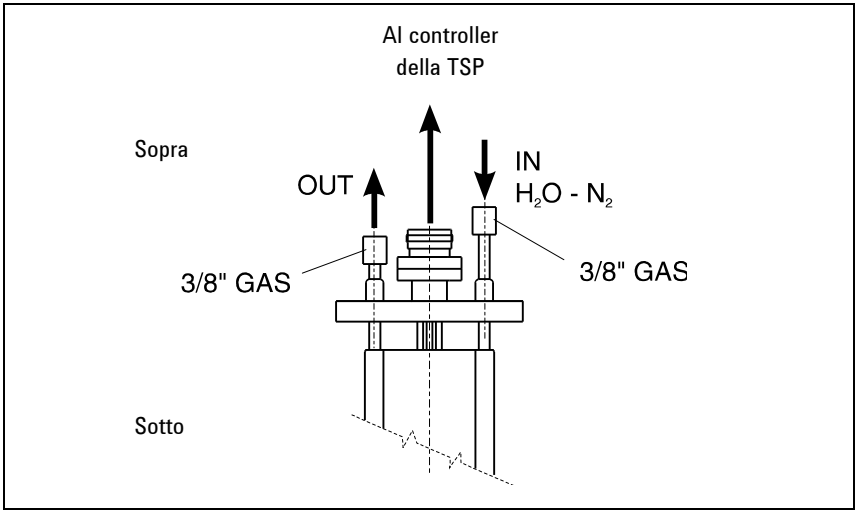


Figura 4 Esempio di posizionamento verticale

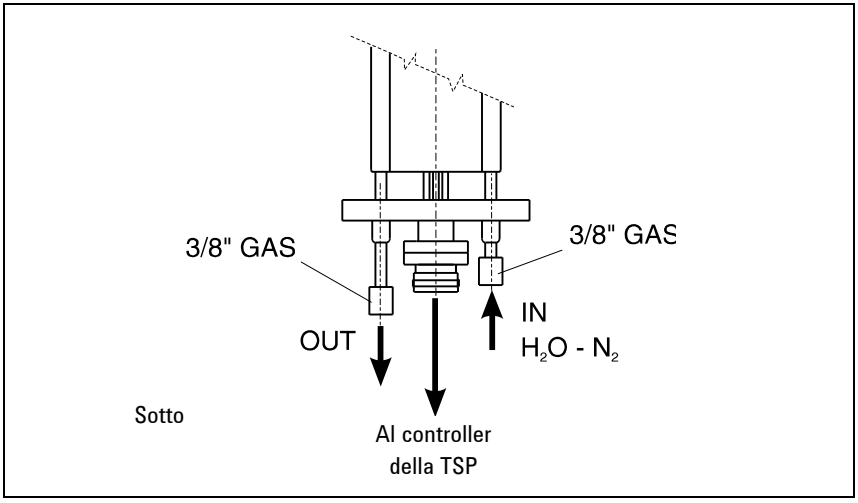


Figura 5 Esempio di posizionamento verticale

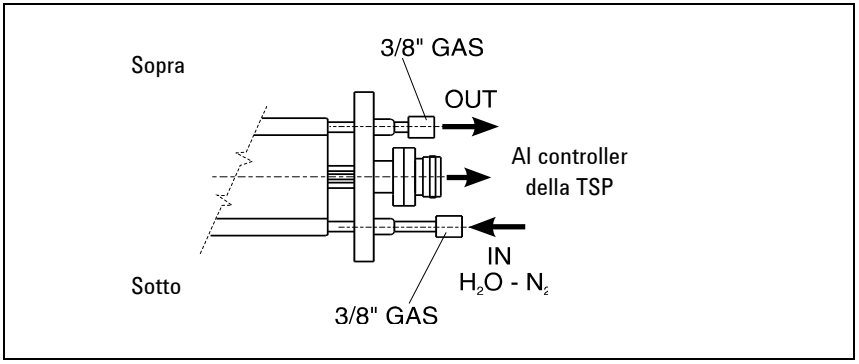


Figura 6 Esempio di posizionamento orizzontale

1 Collegare il cavo proveniente dal Titanium Sublimation Controller al relativo connettore presente al centro del TSP Cryopanel.

AVVERTENZA!

L'elevata corrente che transita nel cavo di collegamento all'unità di controllo potrebbe causare gravi infortuni o pericolo di morte. Prima di collegare il cavi al connettore della cartuccia TSP, oppure prima di scollegarlo, assicurarsi di aver spento l'unità di controllo.

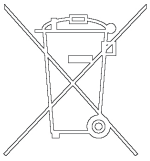
Smaltimento

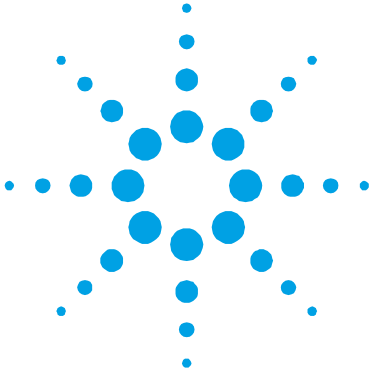
Significato del logo "WEEE" presente sulle etichette.

Il simbolo qui sotto riportato applicato in ottemperanza alla direttiva CE denominata "WEEE".

Questo simbolo (**valido solo per i paesi della Comunità Europea**) indica che il prodotto sul quale è applicato, NON deve essere smaltito insieme ai comuni rifiuti domestici o industriali, ma deve essere avviato ad un sistema di raccolta differenziata.

Si invita pertanto l'utente finale a contattare il fornitore del dispositivo, sia esso la casa madre o un rivenditore, per avviare il processo di raccolta e smaltimento, dopo opportuna verifica dei termini e condizioni contrattuali di vendita.





2
Anleitung zur Installation

Übersetzung der Originalanleitungen

Allgemeine Hinweise

Dieses Gerät ist für den professionellen Gebrauch bestimmt. Vor dem Gebrauch soll der Benutzer dieses Handbuch sowie alle weiteren von Agilent mitgelieferten Zusatzdokumentationen genau le-sen. Bei vollständiger bzw. teilweiser Nichtbeachtung der enthaltenen Hinweise, unsachgemäßem Gebrauch durch ungeschultes Personal, nicht autorisierten Eingriffen und Mißachtung der nationalen Bestimmungen übernimmt Firma Agilent keinerlei Haftung.

In dieser Gebrauchsanleitung werden Sicherheitshinweise folgendermaßen hervorgehoben:

WARNUNG!

Die Warnhinweise lenken die Aufmerksamkeit des Bedieners auf eine spezielle Prozedur oder Praktik, die bei unkorrekter Ausführung schwere Verletzungen hervorrufen könnte.

VORSICHT! Die Vorsichtshinweise vor bestimmten Prozeduren machen den Bediener darauf aufmerksam, daß bei Nichteinhaltung Schäden am Gerät entstehen können.

HINWEIS Die Hinweise enthalten wichtige Informationen, die aus dem Text hervorgehoben werden.

Allgemeine Angaben zum TSP Cryopanel

Der TSP Cryopanel wurde entwickelt, um auf einen Flansch 8“ OD ConFlat® montiert und in Verbindung mit TSP (Titanium Sublimation Pump) verwendet zu werden. Das Cryopanel ist für den Betrieb im UHV vorgesehen und kann sowohl mit Wasser oder flüssigen Stickstoff gekühlt, als auch ungekühlt eingesetzt werden. Das Cryopanel kann an Ionengetterpumpen mit zusätzlichen Flansch am Boden (doubleended) oder an der Seite (side port) installiert werden.

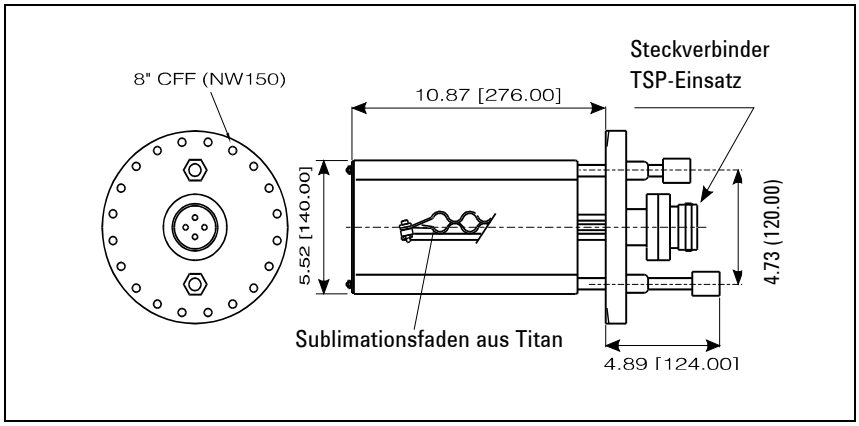


Abbildung 1 Abmessungen TSP Cryopanel in mm [Zoll]

Technische Daten

Tab. 1

	N_2	H_2	H_2O
Pumpgeschwindigkeit bei 20 °C mit TSP und Wasserkühlung (l/s)	516	1205	578
Pumpgeschwindigkeit bei -195 °C mit TSP und Kühlung mit LN_2 (l/s)	555	1760	696*
Interne Pumpoberfläche (cm^2)		826	
Hauptflansch		8" CF (NW 150)	
Behälterinhalt (Liter)		1.8	
Kühlanschlüsse		3/8" Gas	
Flansch der Titanquelle		2¾ CF	

* Da H2O eine kondensierbare Flüssigkeit ist, berücksichtigt dieser Wert die Pumpwirkung auf die Ausgangsfläche des Cryopanel. Die Pumpgeschwindigkeit beträgt 12.000 l/sec.

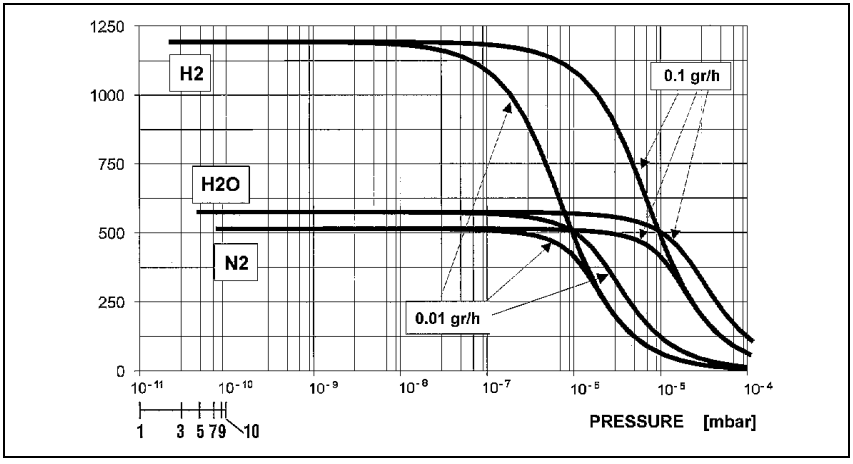


Abbildung 2 Pumpgeschwindigkeit bei 20 °C mit TSP und Wasserkühlung

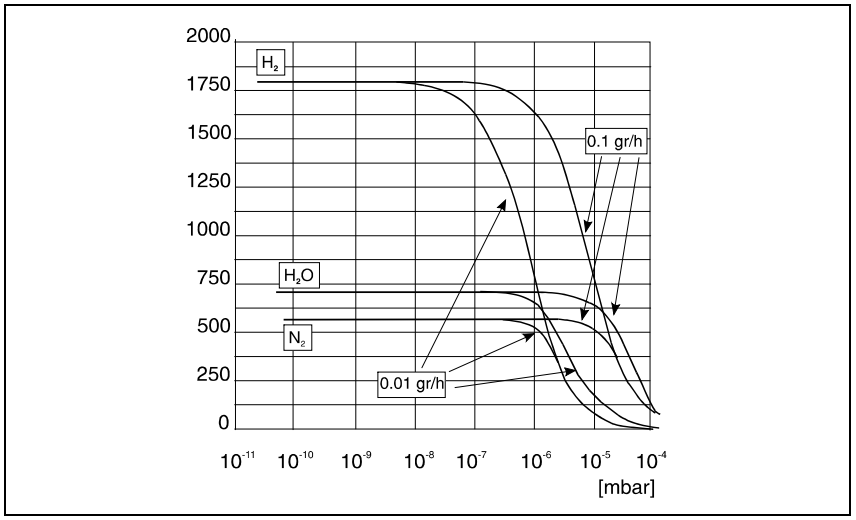


Abbildung 3 Pumpgeschwindigkeit bei -195 °C mit TSP und Kühlung mit flüssigem Stickstoff

Installation des TSP Cryopanel

WARNUNG!

Wird zur Kühlung LN_2 verwendet, ist bei der Installation des TSP Cryopanel besondere Vorsicht geboten, da LN_2 schwere Verbrennungen verursacht, wenn es mit der Haut in Berührung kommt.

Zur richtigen Installation des TSP Cryopanel sind die nachstehende Anleitungen genau zu befolgen:

1 Den 8” ConFlat® Flansch des Cryopanel und den pumpseitigen Flansch sorgfältig reinigen.

2 Die Muttern einsetzen und mit einem Drehmoment von jeweils 6 – 11 Nm (4.5 - 8 ft.-lbs) anschrauben. Sobald eine Mutter eingeschraubt ist, muß danach immer die der Flanschmitte gegenüberliegende Mutter eingeschraubt werden.

3 Diesen Vorgang zweimal wiederholen.

4 Die Muttern soweit anziehen, bis sich die Flansche berühren und eine Erhöhung des Drehmoments festzustellen ist.

5 Die Leitungen der Kühlflüssigkeit mit den Anschlüssen am TSP Cryopanel verbinden und die Befestigungsmuttern entsprechend anziehen.

Installation des TSP-Einsatzes

Normalerweise wird der TSP-Einsatz mit einem Flansch OD 2¾" ConFlat® mit drei Titan-Molybdän-Fäden geliefert, die bis 400 °C aufheizbar (bakeable) sind. Die größte Sublimation erfolgt bei 300 W Leistung.

Die Befestigung des Einsatzes am Cryopanel ist entsprechend der im vorherigen Abschnitt enthaltenen Beschreibung vorzunehmen. Dabei ist da-rauf zu achten, dass der Flansch so angebracht wird, dass sich der Stecker des von der Steuereinheit kommenden Kabels und die Kühlleitungen sich nicht gegenseitig behindern.

HINWEIS Bei der Installation muß die Strömungsrichtung der Kühlflüssigkeit beachtet werden, wie in den folgenden Beispielen dargestellt.

VORSICHT! Es ist darauf zu achten, daß evtl. vorhandene Kühlflüssigkeiten vor dem Ausheizen aus dem Cryoplanel entfernt werden und Kühlleitungen während des Ausheizvorgangs nicht verschlossen sind.

Die folgenden Abbildungen enthalten einige Beispiele für die Anordnung des TSP Cryopanel.

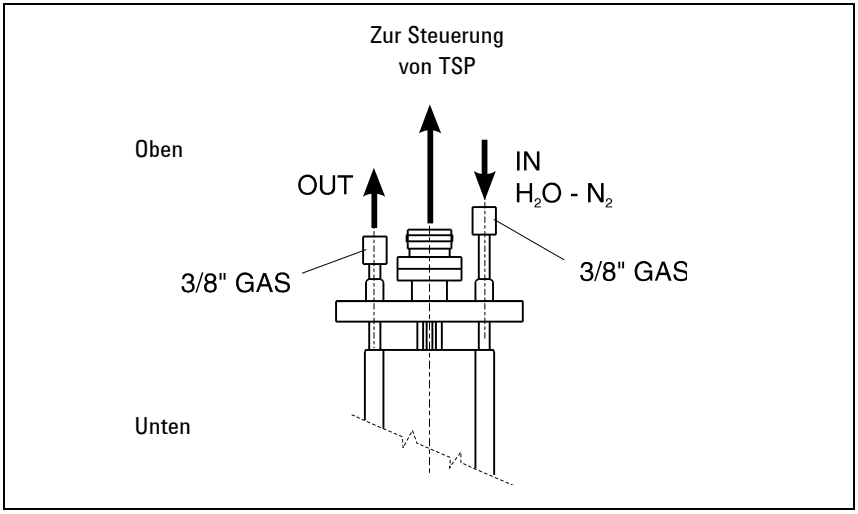


Abbildung 4 Beispiel für senkrechte Anordung

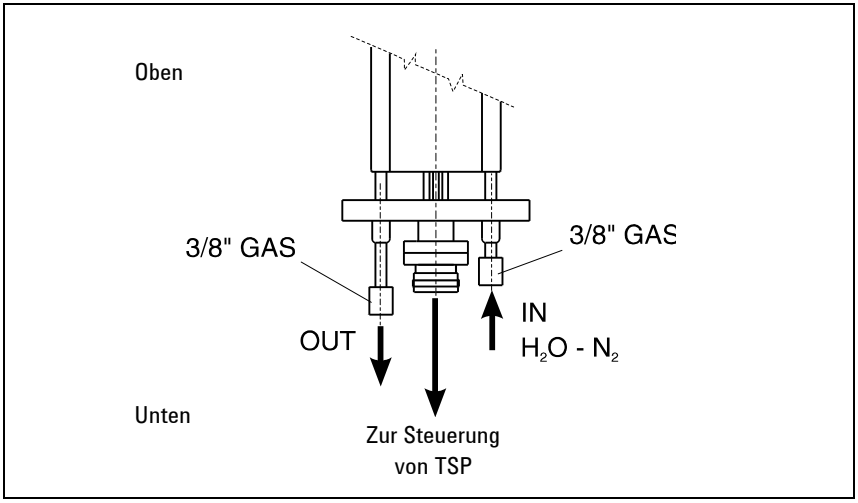


Abbildung 5 Beispiel für senkrechte Anordung

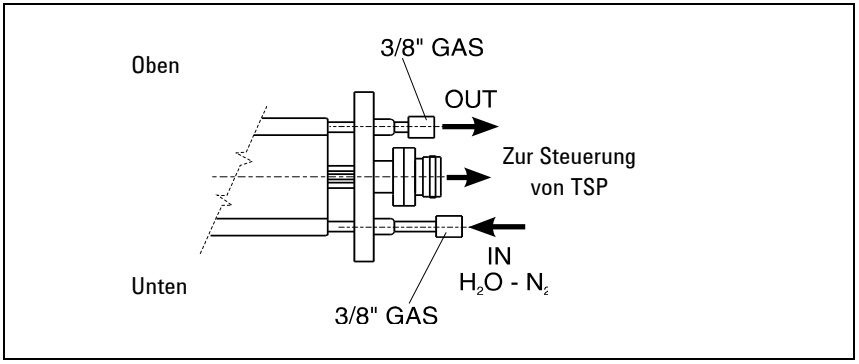


Abbildung 6 Beispiel für waagrechte Anordnung

1 Das vom Titanium Sublimation Controller kommende Kabel an den entsprechenden Steckverbinder auf dem TSP Cryopanel anschließen.

WARNUNG!

Durch den starken Strom, der durch das Anschlusskabel der Steuereinheit fließt, besteht große Unfall- bzw. Todesgefahr. Bevor das Kabel an den Steckverbinder des TSP-Einsatzes angeschlossen wird und bevor es von diesem abgezogen wird, ist unbedingt sicherzustellen, dass die Steuereinheit ausgeschaltet ist.

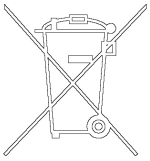
Entsorgung

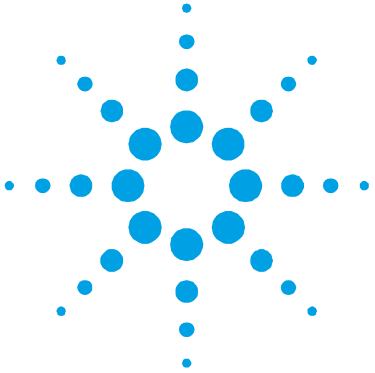
Bedeutung des "WEEE" Logos auf den Etiketten.

Das folgende Symbol ist in Übereinstimmung mit der EU-Richtlinie WEEE (Waste Electrical and Electronic Equipment) angebracht.

Dieses Symbol (**nur in den EU-Ländern gültig**) zeigt an, dass das betreffende Produkt nicht zusammen mit Haushaltsmüll entsorgt werden darf sondern einem speziellen Sammelsystem zugeführt werden muss.

Der Endabnehmer sollte daher den Lieferanten des Geräts - d.h. die Muttergesellschaft oder den Wiederverkäufer - kontaktieren, um den Entsorgungsprozess zu starten, nachdem er die Verkaufsbedingungen geprüft hat.





3
Procédure pour l'installation

Traduction de la mode d'emploi originale

Indications Generales

Cet appareillage a été conçu en vue d'une utilisation professionnelle. Il est conseillé à l'utilisateur de lire attentivement cette notice d'instructions ainsi que toute autre indication supplémentaire fournie par Agilent avant d'utiliser l'appareil. Agilent décline toute responsabilité en cas de non respect total ou partiel des instructions fournies, d'opérations non autorisées, d'utilisation impropre par du personnel non formé ou contraires aux réglementations nationales spécifiques.

Cette notice utilise les signes conventionnels suivants:

AVERTISSEMENT!

Les messages d'avertissement attirent l'attention de l'opérateur sur une procédure ou une manœuvre spéciale dont la mauvaise exécution risque de provoquer de graves lésions.

ATTENTION! Les messages d'attention apparaissent avant certaines procédures dont le non-respect peut endommager sérieusement l'appareillage.

NOTE Les notes contiennent des renseignements importants, extrapolés du texte.

Generalites sur le TSP Cryopanel Assy

Le TSP Cryopanel a été conçu pour être utilisé conjointement avec la TSP (Titanium Sublimation Pump) par un montage sur une bride 8“ OD Con-Flat®. On peut utiliser de l'eau ou de l'azote liquide pour le refroidissement. En outre, le système peut fonctionner en modalité UHV sans refroidissement. Le Cryopanel peut être installé sur des pompes ioniques doubleended ou sideported.

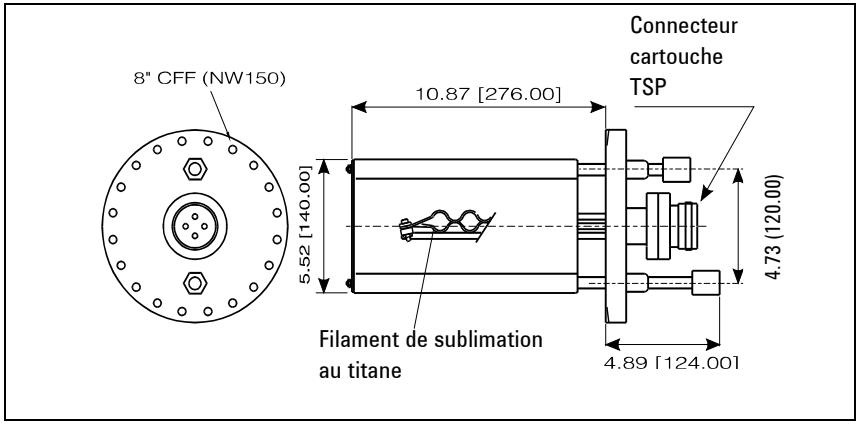


Figure 1 Encombrements TSP Cryopanel en mm [pouces]

Caractéristiques Techniques

Tab. 1

	N_2	H_2	H_2O
Vitesse de pompage à 20 °C avec TSP et refroidissement à l'eau (l/s)	516	1205	578
Vitesse de pompage à -195 °C avec TSP et refroidissement au LN_2 (l/s)	555	1760	696*
Surface de pompage interne (cm^2)		826	
Bride principale		8" CF (NW 150)	
Vol. du réservoir (litres)		1.8	
Raccords de refroidissement		3/8" Gas	
Bride source au titane		2¾ CF	

* Compte tenu du fait que l'H2O est un fluide condensable, l'effet du pompage sur la surface de sortie du cryopanel est compris. La vitesse de pompage est de 12.000 l/sec.

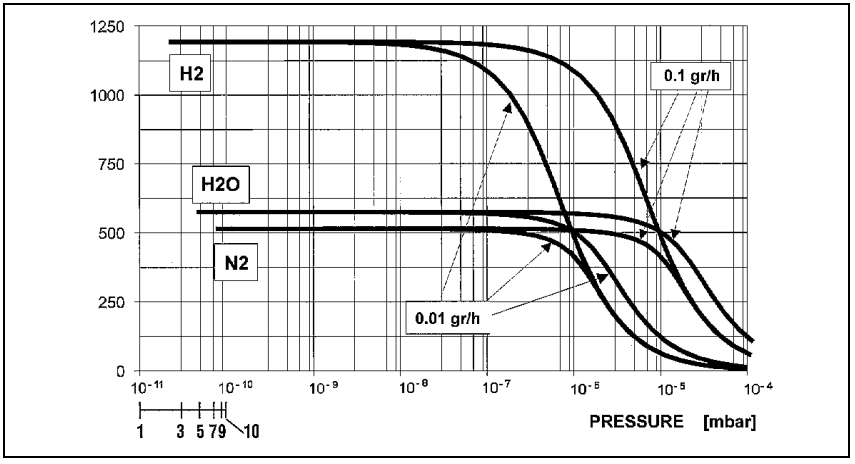


Figure 2 Vitesse de pompage à 20 °C avec TSP et refroidissement à l'eau

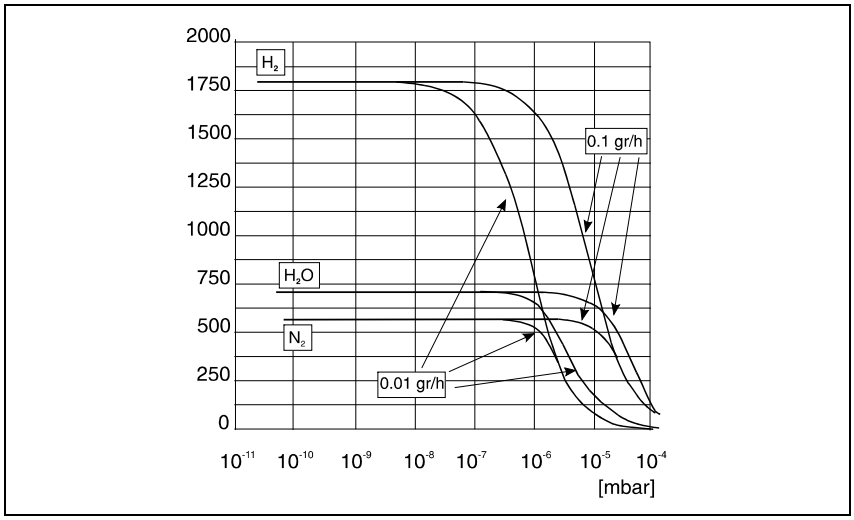


Figure 3 Vitesse de pompage à -195 °C avec TSP et refroidissement à l'azote liquide

Installation du TSP Cryopanel

AVERTISSEMENT!

Si l'on utilise du LN_2 pour le refroidissement, faire très attention en manipulant le TSP Cryopanel pendant les phases d'installation, car le contact du LN_2 avec la peau provoque de graves brûlures.

Pour installer correctement le TSP Cryopanel, suivre fidèlement la procédure indiquée cidessous:

1. Nettoyer soigneusement la bride de 8" ConFlat® du Cryopanel ainsi que la bride correspondante sur la pompe.
2. Positionner les écrous et les visser chacun à un couple de 6 – 11 Nm (4.5 - 8 ft.-lbs). Après avoir vissé un écrou, toujours visser celui à l'opposé par rapport au centre de la bride.

3 Répéter cette séquence de vissage pendant encore deux cycles.

4 Continuer à visser les écrous jusqu'à ce que les côtés des brides entrent en contact et jusqu'à avoir une augmentation du couple.

5 Fixer les tubulures du fluide de refroidissement aux fixations correspondantes sur le TSP Cryopanel, en prenant soin de serrer les écrous de blocage de manière appropriée.

Installation de la Cartouche TSP

Normalement, la cartouche TSP est fournie avec une bride OD 2¾" ConFlat® avec trois filaments au titane - molybdène; chacun étant bakable (chauffable) à 400 °C. La sublimation maximum est obtenue en fournissant une puissance de 300 W.

Pour fixer la cartouche sur le Cryopanel, procéder comme le décrit le paragraphe précédent, en prenant garde à fixer la bride de manière à ne pas créer d'interférences entre le connecteur du câble provenant du système de commande et les tubulures de refroidissement.

NOTE Pendant la phase d'installation, il faut respecter le sens de circulation du fluide de refroidissement, ainsi que l'illustrent les exemples suivants.

ATTENTION! Veuillez retirer les liquides de refroidissement du Cryopanel avant de cuire au four et laissez le raccord du tuyau de refroidissement ouvert pendant la cuisson.

Les figures illustrent quelques exemples de positionnement du TSP Cryopanel.

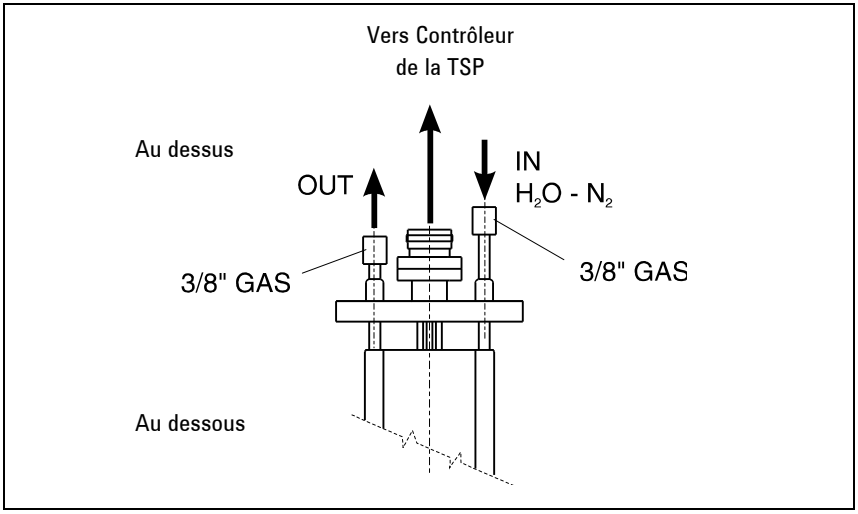


Figure 4 Exemple de positionnement vertical

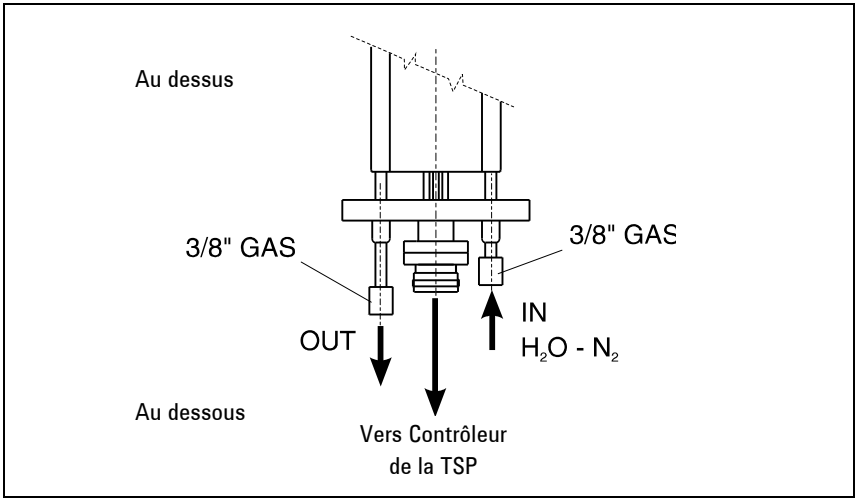


Figure 5 Exemple de positionnement vertical

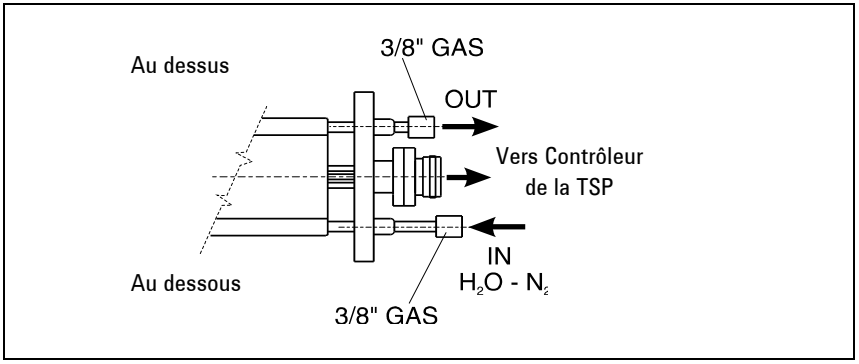


Figure 6 Exemple de positionnement horizontal

1 Brancher le câble provenant du Titanium Sublimation Controller au connecteur correspondant sur le centre du TSP Cryopanel.

AVERTISSEMENT!

Le courant élevé qui passe dans le câble de connexion au système de commande pourrait provoquer de graves accidents et mettre les personnes en danger de mort. Avant de brancher les câbles au connecteur de la cartouche TSP, et de même avant de le débrancher, vérifier que l'on a éteint le système de commande.

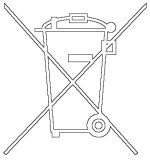
Mise au rebut

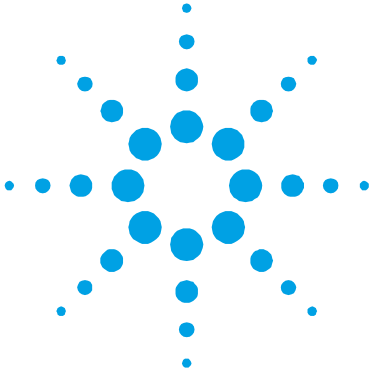
Signification du logo "WEEE" imprimé sur les étiquettes.

Le symbole ci-dessous est appliqué conformément à la directive CE nommée "WEEE".

Ce symbole (**uniquement valide pour les pays de la Communauté européenne**) indique que le produit sur lequel il est appliqué NE doit PAS être mis au rebut avec les ordures ménagères ou les déchets industriels ordinaires, mais passer par un système de collecte sélective.

Après avoir vérifié les termes et conditions du contrat de vente, l'utilisateur final est donc prié de contacter le fournisseur du dispositif, maison mère ou revendeur, pour mettre en œuvre le processus de collecte et mise au rebut.





4
Installation procedure

Original Instructions

General Information

This equipment is destined for use by professionals. The user should read this instruction manual and any other additional information supplied by Agilent before operating the equipment. Agilent will not be held responsible for any events occurring due to non-compliance, even partial, with these instructions, improper use by untrained persons, non-authorized interference with the equipment or any action contrary to that provided for by specific national standards.

This manual uses the following standard protocol:

WARNING!

The warning messages are for attracting the attention of the operator to a particular procedure or practice which, if not followed correctly, could lead to serious injury.

CAUTION! The caution messages are displayed before procedures which, if not followed, could cause damage to the equipment.

NOTE The notes contain important information taken from the text.

Overview on the TSP Cryopanel Assy

The TSP Cryopanel has been designed for use with the TSP (Titanium Sublimation Pump) and is mounted on an 8” OD ConFlat® flange. It can operate with water or liquid nitrogen cooling, or un-cooled if used at UHV. The Cryopanel can be mounted on double-ended or side ported ion pumps.

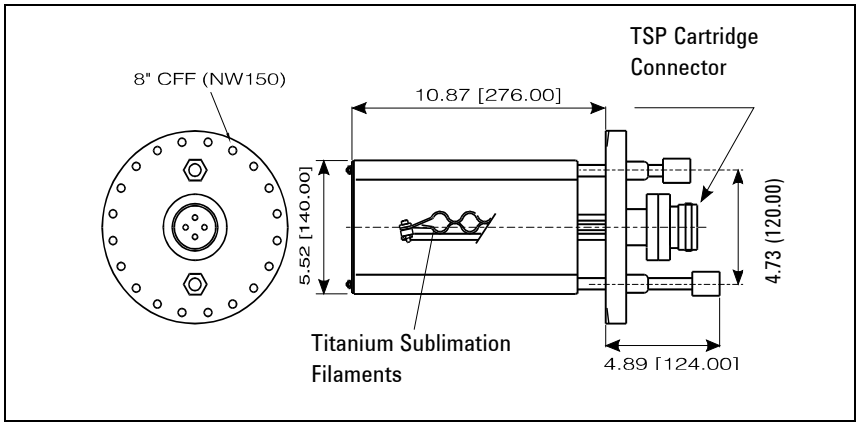


Figure 1 TSP Cryopanel Outline Drawing in mm [Inches]

Technical Specifications

Tab. 1

	N_2	H_2	H_2O
Pumping speed at 20 °C with TSP and water cooled (l/s)	516	1205	578
Pumping speed at -195 °C with TSP and LN_2 cooled (l/s)	555	1760	696*
Inner pumping surface (cm^2)		826	
Main flange		8" CF (NW 150)	
Reservoir volume (liters)		1.8	
Cooling connection		3/8" Gas	
Titanium source flange		2¾ CF	

* It must be considered that H2O is a condensable gas and therefore the pumping effect of the outlet surface of the Cryopanel should be included. This pumping speed is = 12.000 l/s.

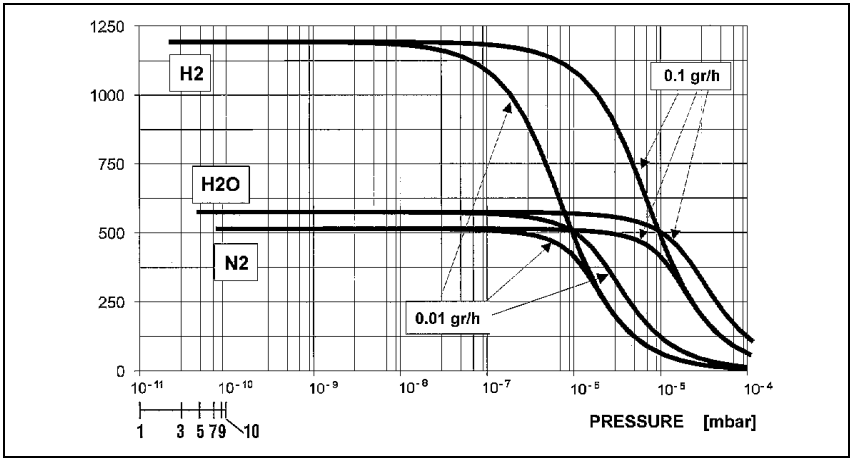


Figure 2 Pumping Speed at 20 °C with TSP and Water Cooling

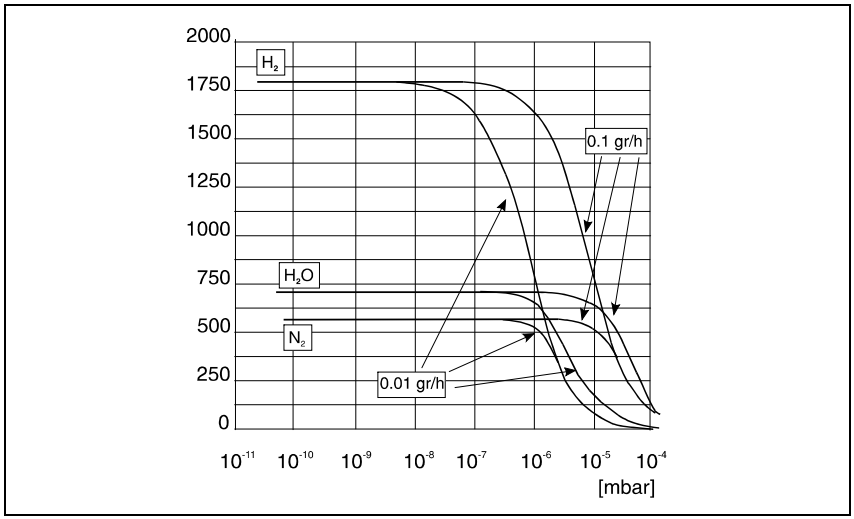


Figure 3 Pumping Speed at -195 °C with TSP and Liquid Nitrogen Cooling

TSP Cryopanel Installation

WARNING!

If LN_2 is used for cooling, be very careful when handling the TSP Cryopanel during installation. Contact with LN_2 causes severe burns to the skin.

To correctly install the TSP Cryopanel, carefully follow the procedure indicated below.

1. Adequately clean the Cryopanel's 8" ConFlat® flange and the flange present on the pump.
2. Attach the nuts and tighten each one turn to 6 – 11 Nm (4.5 - 8 ft.-lbs) of torque. After tightening a nut, always tighten the opposite nut with respect to the center of the flange.
3. Repeat this tightening sequence for another two cycles.

4 Continue tightening the bolts until the flange faces meet and a pronounced increase in torque is felt.

5 Secure the cooling tubes for the liquid to the respective fittings on the TSP Cryopanel making sure to adequately tighten the connecting nuts.

TSP Cartridge Installation

The TSP cartridge is usually provided with an OD 2¾" ConFlat® flange with three titanium-molybdenum filaments, each bakeable at 400 °C. Maximum sublimation is obtained with a power of 300 W.

To secure the cartridge on the Cryopanel, proceed as explained in the previous section, making sure to position the flange in a way to avoid interference between the connector of the cable from the control unit and the cooling tubes.

NOTE During installation consider the direction in which the cooling liquid flows, as shown in the following examples.

CAUTION! Take care to remove cooling liquids from the Cryopanel prior baking and keep the cooling tube connection open during baking.

The following figures show some examples for how to position the TSP Cryopanel.

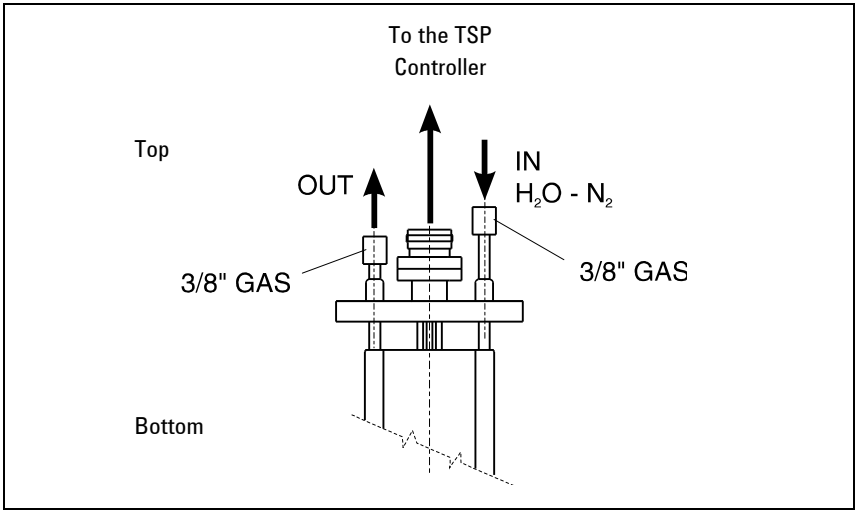


Figure 4 Example of a Vertical Positioning

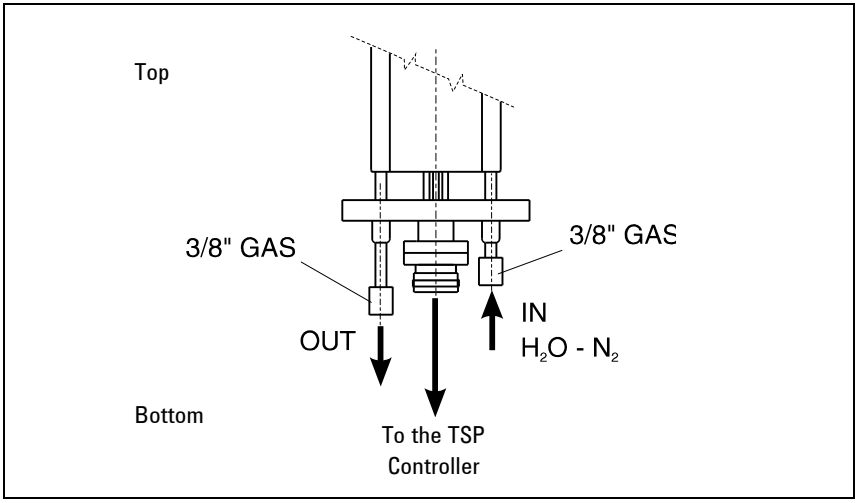


Figure 5 Example of a Vertical Positioning

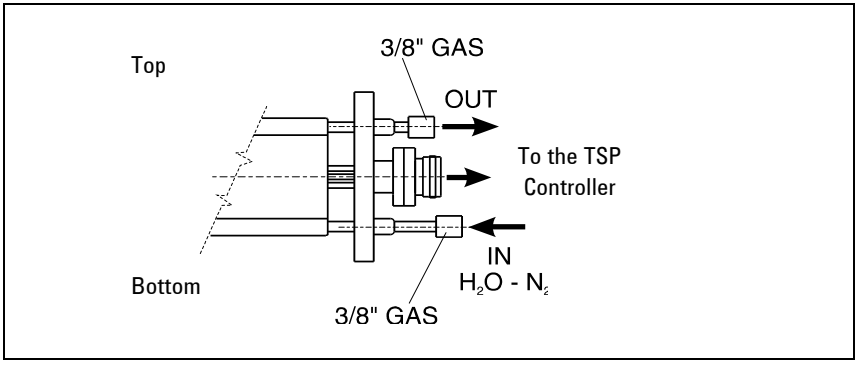


Figure 6 Example of a Horizontal Positioning

1 Attach the cable from the Titanium Sublimation Controller to the connector in the center of the TSP Cryopanel.

WARNING! **The high voltage present in the control unit connection cable could cause severe injury or death. Be sure to power off the control unit before attaching the cable to the TSP cartridge connector, or before disconnecting it.**

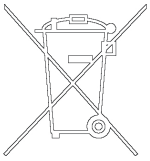
Disposal

Meaning of the "WEEE" logo found in labels.

The following symbol is applied in accordance with the EC WEEE (Waste Electrical and Electronic Equipment)

Directive. This symbol **(valid only in countries of the European Community)** indicates that the product it applies to must NOT be disposed of together with ordinary domestic or industrial waste but must be sent to a differentiated waste collection system.

The end user is therefore invited to contact the supplier of the device, whether the Parent Company or a retailer, to initiate the collection and disposal process after checking the contractual terms and conditions of sale.



Agilent Technologies

Vacuum Products Division

Dear Customer,

Thank you for purchasing an Agilent vacuum product. At Agilent Vacuum Products Division we make every effort to ensure that you will be satisfied with the product and/or service you have purchased.

As part of our Continuous Improvement effort, we ask that you report to us any problem you may have had with the purchase or operation of our products. On the back side you find a Corrective Action request form that you may fill out in the first part and return to us.

This form is intended to supplement normal lines of communications and to resolve problems that existing systems are not addressing in an adequate or timely manner.

Upon receipt of your Corrective Action Request we will determine the Root Cause of the problem and take the necessary actions to eliminate it. You will be contacted by one of our employees who will review the problem with you and update you, with the second part of the same form, on our actions.

Your business is very important to us. Please, take the time and let us know how we can improve.

Sincerely.

Giampaolo LEVI

Vice President and General Manager
Agilent Vacuum Products Division

Note: Fax or mail the Customer Request for Action (see backside page) to Agilent Vacuum Products Division (Torino) – Quality Assurance or to your nearest Agilent representative for onward transmission to the same address.

CUSTOMER REQUEST FOR CORRECTIVE / PREVENTIVE / IMPROVEMENT ACTION

TO: AGILENT VACUUM PRODUCTS DIVISION TORINO – QUALITY ASSURANCE

FAX N°: XXXX-011-9979350

ADDRESS: AGILENT TECHNOLOGIES ITALIA S.p.A. – Vacuum Products Division –

Via F.lli Varian, 54 – 10040 Leinì (TO) – Italy

E-MAIL: vpd-qualityassurance_pdl-ext@agilent.com

NAME	COMPANY	FUNCTION

ADDRESS:

TEL. N° : _____ FAX N° : _____

E-MAIL: _____

PROBLEM / SUGGESTION :

REFERENCE INFORMATION (model n°, serial n°, ordering information, time to failure after installation, etc.):

DATE _____

CORRECTIVE ACTION PLAN / ACTUATION (by AGILENT VPD) LOG N° _____

XXX = Code for dialing Italy from your country (es. 01139 from USA; 00139 from Japan, etc.)

Agilent Technologies

Agilent Technologies

Vacuum Products Division
Instructions for returning products

Dear Customer:

Please follow these instructions whenever one of our products needs to be returned.

1) Complete the attached Request for Return form and send it to Agilent Technologies (see below), taking particular care to identify all products that have pumped or been exposed to any toxic or hazardous materials.

2) After evaluating the information, Agilent Technologies will provide you with a Return Authorization (RA) number via email or fax, as requested.
Note: Depending on the type of return, a Purchase Order may be required at the time the Request for Return is submitted. We will quote any necessary services (evaluation, repair, special cleaning, eg).

3) **Important steps for the shipment of returning product:**
   - Remove all accessories from the core product (e.g. inlet screens, vent valves).
   - Prior to shipment, drain any oils or other liquids, purge or flush all gasses, and wipe off any excess residue.
   - If ordering an Advance Exchange product, **please use the packaging from the Advance Exchange to return the defective product.**
   - Seal the product in a plastic bag, and package product carefully to avoid damage in transit. You are responsible for loss or damage in transit.
   - Agilent Technologies is not responsible for returning customer provided packaging or containers.
   - **Clearly label package with RA number.** Using the shipping label provided will ensure the proper address and RA number are on the package. Packages shipped to Agilent without a RA clearly written on the outside cannot be accepted and will be returned.

4) Return only products for which the RA was issued.

5) **Product being returned under a RA must be received within 15 business days.**

6) **Ship to the location specified on the printable label, which will be sent, along with the RA number, as soon as we have received all of the required information.** Customer is responsible for freight charges on returning product.

7) Return shipments must comply with all applicable **Shipping Regulations** (IATA, DOT, etc.) and carrier requirements.

RETURN THE COMPLETED **REQUEST FOR RETURN** FORM TO YOUR NEAREST LOCATION:

EUROPE:	**NORTH AMERICA:**	**PACIFIC RIM:**
Fax: 00 39 011 9979 330		
Fax Free: 00 800 345 345 00	Fax: 1 781 860 9252	please visit our website for individual
Toll Free: 00 800 234 234 00	Toll Free: 800 882 7426, Option 3	office information
vpt-customercare@agilent.com	vpl-ra@agilent.com	http://www.agilent.com

Agilent Technologies

Vacuum Products Division
Request for Return Form
(Health and Safety Certification)

Please read important policy information on Page 3 that applies to all returns.

1) CUSTOMER INFORMATION

Company Name:	**Contact Name:**
Tel: **Email:**	**Fax:**
Customer Ship To:	**Customer Bill To:**
Europe only: **VAT reg. Number:**	USA/Canada only: ☐ **Taxable** ☐ **Non-taxable**

2) PRODUCT IDENTIFICATION

Product Description	Agilent P/N	Agilent S/N	Original Purchasing Reference

3) TYPE OF RETURN (**Choose one from each row** and supply Purchase Order if requesting a billable service)

3A. ☐ Non-Billable ☐ Billable ➡ New PO # (hard copy must be submitted with this form):

3B. ☐ Exchange ☐ Repair ☐ Upgrade ☐ Consignment/Demo ☐ Calibration ☐ Evaluation ☐ Return for Credit

4) HEALTH and SAFETY CERTIFICATION

AGILENT TECHNOLOGIES CANNOT ACCEPT ANY PRODUCTS CONTAMINATED WITH BIOLOGICAL OR EXPLOSIVE HAZARDS, RADIOACTIVE MATERIAL, OR MERCURY AT ITS FACILITY.
Call Agilent Technologies to discuss alternatives if this requirement presents a problem.

The equipment listed above (check one):

☐ **HAS NOT** pumped or been exposed to any toxic or hazardous materials. OR

☐ **HAS** pumped or been exposed to the following toxic or hazardous materials. If this box is checked, the following information must also be filled out. Check boxes for all materials to which product(s) pumped or was exposed:

☐ Toxic ☐ Corrosive ☐ Reactive ☐ Flammable ☐ Explosive ☐ Biological ☐ Radioactive

List all toxic/hazardous materials. Include product name, chemical name, and chemical symbol or formula:

_____

NOTE: If a product is received at Agilent which is contaminated with a toxic or hazardous material that was not disclosed, **the customer will be held responsible** for all costs incurred to ensure the safe handling of the product, and **is liable** for any harm or injury to Agilent employees as well as to any third party occurring as a result of exposure to toxic or hazardous materials present in the product.

Print Name: **Authorized Signature: .....** **Date:**

5) FAILURE INFORMATION:

Failure Mode (REQUIRED FIELD. See next page for suggestions of failure terms):
Detailed Description of Malfunction: (Please provide the error message)
Application (system and model):

I understand and agree to the terms of Section 6, Page 3/3.
Print Name: **Authorized Signature: .....** **Date:**

Agilent Technologies

Vacuum Products Division
Request for Return Form
(Health and Safety Certification)

Please use these Failure Mode to describe the concern about the product on Page 2.

TURBO PUMPS and TURBO CONTROLLERS

APPARENT DEFECT/MALFUNCTION		POSITION	PARAMETERS	
- Does not start	- Noise	- Vertical	Power:	Rotational Speed:
- Does not spin freely	- Vibrations	-Horizontal	Current:	Inlet Pressure:
- Does not reach full speed	-Leak	-Upside-down	Temp 1:	Foreline Pressure:
- Mechanical Contact	-Overtemperature	-Other:	Temp 2:	Purge flow:
- Cooling defective	-Clogging	.....	OPERATING TIME:	

ION PUMPS/CONTROLLERS

- Bad feedthrough	- Poor vacuum
- Vacuum leak	- High voltage problem
- Error code on display	- Other

VALVES/COMPONENTS

- Main seal leak	- Bellows leak
- Solenoid failure	- Damaged flange
- Damaged sealing area	-Other

LEAK DETECTORS

- Cannot calibrate	-No zero/high backround
- Vacuum system unstable	- Cannot reach test mode
- Failed to start	- Other

INSTRUMENTS

- Gauge tube not working	- Display problem
- Communication failure	- Degas not working
- Error code on display	- Other

SCROLL AND ROTARY VANE PUMPS

- Pump doesn't start	- Noisy pump (describe)
- Doesn't reach vacuum	- Over temperature
- Pump seized	- Other

DIFFUSION PUMPS

- Heater failure	- Electrical problem
- Doesn't reach vacuum	- Cooling coil damage
- Vacuum leak	- Other

Section 6) *ADDITIONAL TERMS*

Please read the terms and conditions below as they apply to all returns and are in addition to the Agilent Technologies Vacuum Product Division – Products and Services Terms of Sale.

- Customer is responsible for the freight charges for the returning product. Return shipments must comply with all applicable **Shipping Regulations** (IATA, DOT, etc.) and carrier requirements.
- Customers receiving an Advance Exchange product agree to return the defective, rebuildable part to Agilent Technologies **within 15 business days**. Failure to do so, or returning a non-rebuildable part (crashed), will result in an invoice for the non-returned/non-rebuildable part.
- Returns for credit toward the purchase of new or refurbished Products are subject to prior Agilent approval and may incur a restocking fee. Please reference the original purchase order number.
- Units returned for evaluation will be evaluated, and a quote for repair will be issued. If you choose to have the unit repaired, the cost of the evaluation will be deducted from the final repair pricing. A Purchase Order for the final repair price should be issued within 3 weeks of quotation date. Units without a Purchase Order for repair will be returned to the customer, and the evaluation fee will be invoiced.
- A Special Cleaning fee will apply to all exposed products per Section 4 of this document.
- If requesting a calibration service, units must be functionally capable of being calibrated.

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