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Agilent Technologies

Ion Pump Battery Power Supply

Model 729-0800
Model 729-0801
Model 729-0802
Model 829-0800
Model 829-0801
Model 829-0802

(I) MANUALE ISTRUZIONI

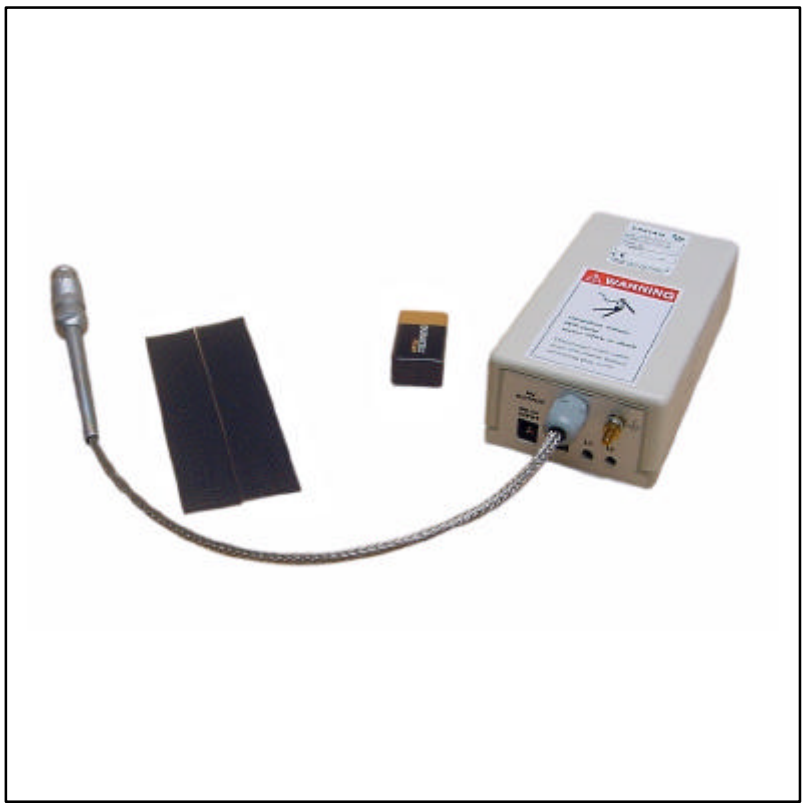
(D) BEDIENUNGSHANDBUCH

(F) NOTICE DE MODE D'EMPLOI

(GB) INSTRUCTION MANUAL

87-900-111-01 (C)
JUNE 2007

Ion Pump
Battery Power Supply



VARIAN

vacuum technologies

Dear Customer,

Thank you for purchasing a VARIAN vacuum product. At VARIAN Vacuum Technologies 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 product. 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.

Sergio PIRAS

Vice President and General Manager
VARIAN Vacuum Technologies

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

CUSTOMER REQUEST FOR CORRECTIVE / PREVENTIVE / IMPROVEMENT ACTION

TO : VARIAN VACUUM TECHNOLOGIES TORINO - QUALITY ASSURANCE

FAX N° : XXXX - 011 - 9979350

ADDRESS: VARIAN S.p.A. - Via F.lli Varian, 54 - 10040 Leinì (Torino) - Italy

E-MAIL : marco.marzio@varianinc.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 VARIAN VTT) LOG N°

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

VARIAN

PROCEDURA PER L'INSTALLAZIONE DELL'ALIMENTATORE ION PUMP HV P.S.

GENERALITÀ

Questa apparecchiatura è destinata ad uso professionale. L'utilizzatore deve leggere attentamente il presente manuale di istruzioni ed ogni altra informazione addizionale fornita dalla Varian prima dell'utilizzo dell'apparecchiatura. La Varian 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

L'apparecchiatura Ion Pump HV P.S. è un alimentatore e viene utilizzato per alimentare le pompe ioniche durante le fasi di trasporto, al fine di impedire l'ingresso di aria all'interno della pompa stessa.

L'alimentatore utilizza una pila non ricaricabile da 9 V, posizionata al suo interno o in alternativa può essere collegato ad una sorgente esterna in grado di fornire una tensione continua di 9 V con maggiore autonomia.

Nei paragrafi seguenti sono riportate tutte le informazioni necessarie a garantire la sicurezza dell'operatore durante l'utilizzo dell'apparecchiatura.

Principio di funzionamento

L'unità è in grado di determinare se la pompa collegata è attiva o meno. Quando l'HV è acceso, l'unità misura la corrente della pompa:

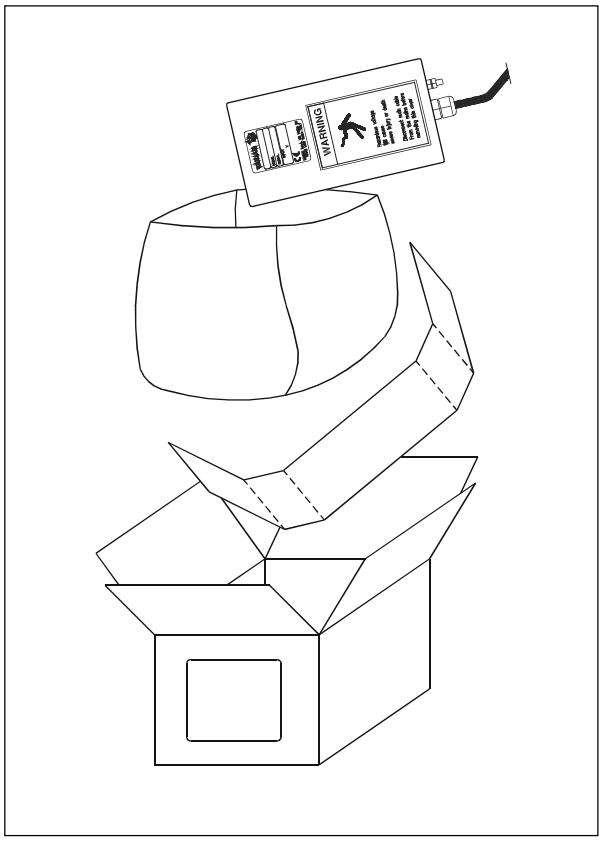
se la corrente è inferiore a 50 nA, la scarica all'interno della pompa è spenta (LED L1 rosso lampeggiante);

se la corrente è superiore a 50 nA, la pompa è operativa (LED L2 verde lampeggiante).

L'unità genera l'HV che alimenta la pompa ionica quando l'interruttore di alimentazione è posto su ON.

PREPARAZIONE PER L'INSTALLAZIONE

Il dispositivo viene fornito in un imballo protettivo speciale; se si presentano segni di danni, che potrebbero essersi verificati durante il trasporto, contattare l'ufficio vendite locale. Durante l'operazione di disimballo, prestare particolare attenzione a non lasciar cadere l'alimentatore e a non sottoporlo ad urti. Non disperdere l'imballo nell'ambiente. Il materiale è completamente riciclabile e risponde alla direttiva CEE 85/399 per la tutela dell'ambiente.



Imballo dell'alimentatore

CARATTERISTICHE TECNICHE

Unità di controllo

Alimentazione:

- una batteria non ricaricabile di tipo PP3 da 9V (6AM6, MN1604, 6LR61) disponibile commercialmente (tipo consigliato Duracell Plus).

- un connettore di ingresso per il collegamento ad un convertitore CA/CC con uscita CC a 9 V (+/- 10%)

ATTENZIONE

Il negativo dell'alimentazione a 9 V è sul pin centrale
Il positivo dell'alimentazione a 9 V è sul collegamento esterno.

Uscita:
- Tensione non regolata da 3,0 a 1,5 kV per 829-XXXX e da –3,0 a –1,5 kV per 729-XXXX secondo il livello di carica della batteria
- Polarità di uscita negativa impostata in fabbrica
- Corrente massima in uscita: 1 µA (corrispondente a 5 e -9 mbar in una pompa ionica 55L/S)
- Potenza massima in uscita: 3 mW

Pannello di controllo:
- Interruttore di alimentazione
- Due LED: L1 verde
  L2 rosso

La tabella fornisce il significato delle configurazioni assunte dai LED.

	L1	L2
HV ACCESO POMPA ACCESA	SPENTO	LAMPEGGIANTE
HV ACCESO POMPA SPENTA	LAMPEGGIANTE	SPENTO
BATTERIA SCARICA	SPENTO	SPENTO

I due LED lampeggiano con un periodo di 2 secondi (1.8 secondi spento, 0.2 secondi acceso).

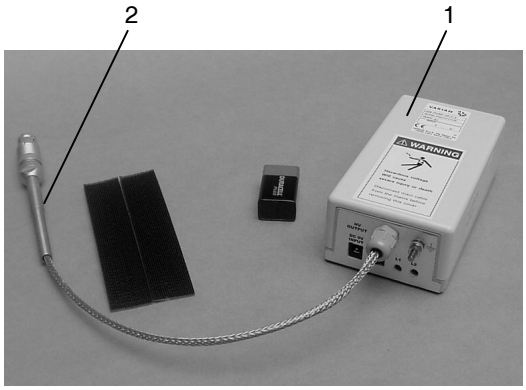
Pannello

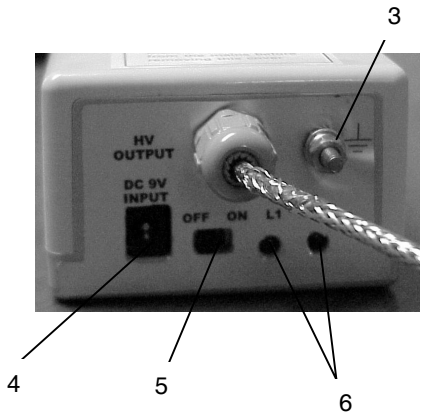
Vita:
- Minimo 30 giorni di operatività con una corrente di uscita pari a 1 µA

Collegamento:
- Cavo HV collegato internamente

Dimensioni:
- 150x80x55 mm

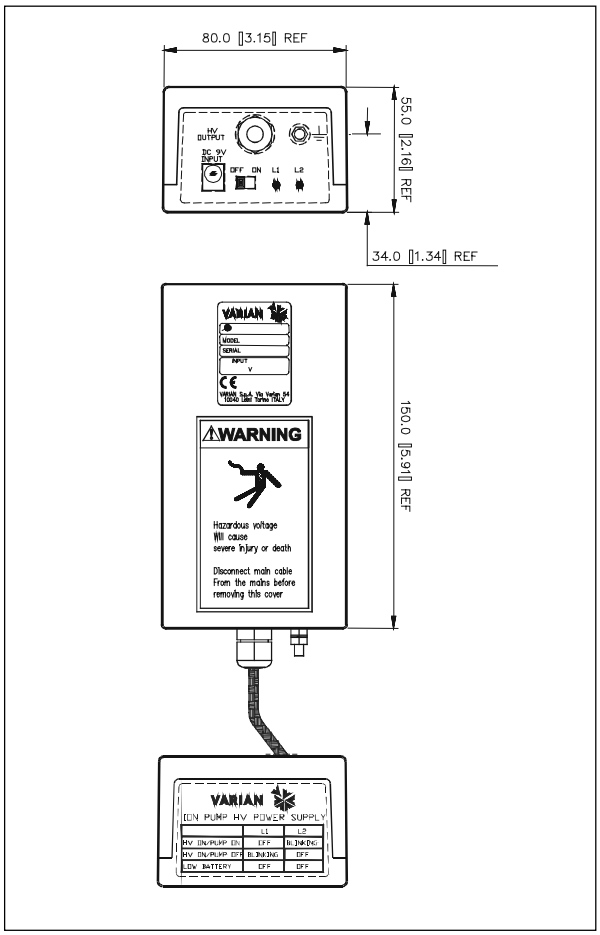
Condizioni ambientali:
- Temperatura di immagazzinamento: da –40 a +85 °C
- Temperatura operativa uguale alla temperatura operativa della batteria
- Umidità relativa: da 10% a 90%
- L'unità viene fornita con polarità di uscita negativa e tipo di connettore pompa richiesti.
- L'unità può essere fornita con tre diversi connettori pompa.





1. Gruppo alimentatore
2. Connettore di alimentazione pompa
3. Morsetto di terra
4. Connettore ingresso tensione esterna
5. Interruttore ON/OFF
6. Led di segnalazione stato operativo

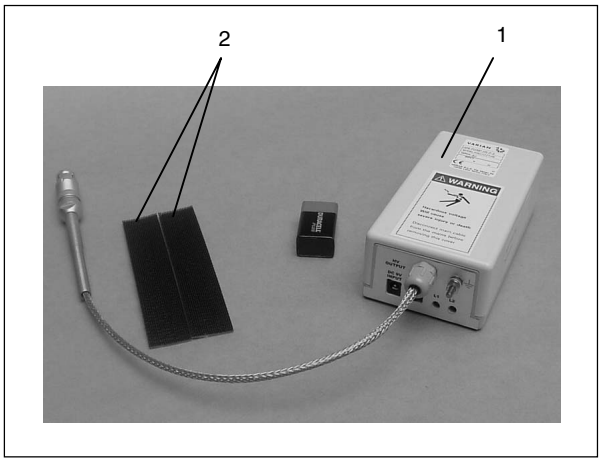
La figura seguente riporta le dimensioni di ingombro dell'alimentatore.



Dimensioni in mm [pollici]

INSTALLAZIONE

In figura sono riportati i vari componenti presenti nel Kit Ion Pump HV P.S.

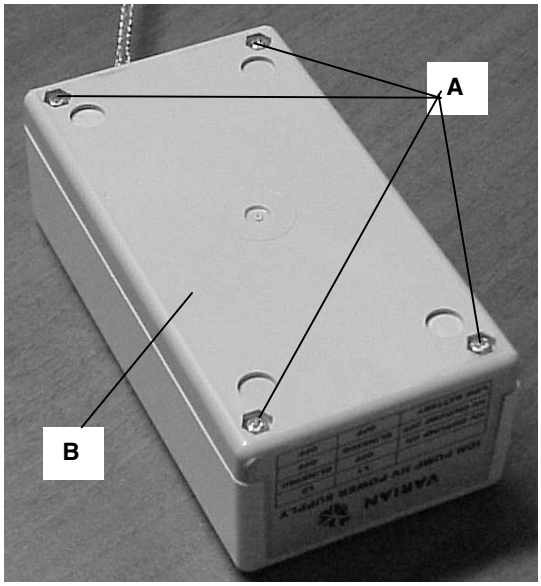


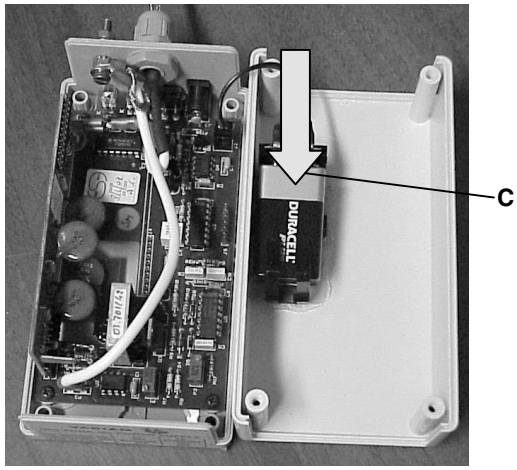
Kit Ion Pump HV P.S.

1. Ion Pump HV P.S.
2. Strisce di velcro adesivo per fissaggio Ion Pump P.S. al corpo pompa

Il dispositivo è spedito con la batteria inserita nella sua sede, ma con i contatti isolati da una striscia di mylar isolante.

Per stabilire il contatto fra i terminali della batteria e il circuito del dispositivo eseguire le seguenti operazioni:



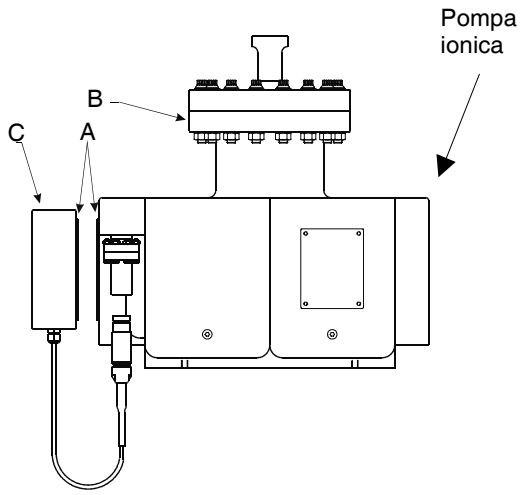


Posizionamento batteria

- Accertarsi che l'interruttore ON/OFF sia in posizione OFF.
- Svitare le 4 viti **A**.
- Aprire il coperchio dell'unità.
- Sfilare la striscia di mylar inserita fra i terminali della batteria **C** e i contatti del portabatteria.
- Riposizionare il coperchio dell'unità e reinserire le 4 viti **A**.

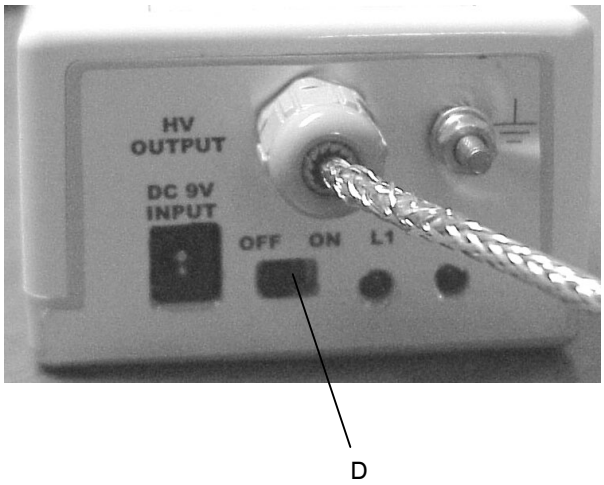
Procedere adesso con il posizionamento sulla pompa.

- Incollare le due strisce di velcro **A**, una sulla pompa **B** e l'altra sull'alimentatore **C**, quindi fissare tra loro i due dispositivi.



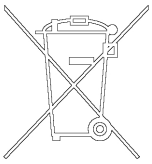
Fissaggio sulla pompa

- Connettere elettricamente alimentatore e pompa.
- Portare l'interruttore **D** in posizione ON.



SMALTIMENTO

Significato del logo "WEEE" presente sulle etichette.
Il simbolo qui sotto riportato è 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.



RICERCA GUASTI

ANOMALIA	POSSIBILE CAUSA	AZIONE CORRETTIVA
1) Con l'interruttore in posizione ON, i LED sono tutti spenti	- Batteria scarica.	- Sostituire la batteria
2) Con l'interruttore in posizione ON, il LED 1 lampeggia e il LED 2 è spento.	- La corrente che alimenta la pompa è < 50 nA. La scarica non è avviata e la pompa non è operativa.	- Aumentare la pressione all'interno della pompa (es. riscaldando la pompa) fino a quando la scarica non è attivata; a questo punto il LED 1 si spegne e il LED 2 inizia a lampeggiare.

INSTALLATIONSPROZEDUR FÜR DIE HS-STROMVERSORGUNG DER IONENPUMPE

ALLGEMEINES

Dieses Gerät ist für professionellen Gebrauch bestimmt. Der Benutzer muss vor seiner Anwendung diese Anleitung und jede andere von Varian gelieferte zusätzliche Information sorgfältig lesen. Varian übernimmt keine Haftung für Schäden wegen völligen oder teilweisen Nichtbefolgens dieser Anleitungen, falschen Gebrauch durch nicht ausgebildetes Personal, nicht genehmigte Eingriffe oder Einsatz im Gegensatz zu den spezifischen nationalen Normen

Das HS-Gerät für die Ionenpumpe ist eine Stromversorgung, die benutzt wird, um die Ionenpumpe während des Transports zu versorgen, damit keine Luft in die Pumpe eindringen kann.

Es wird entweder eine interne nicht wieder aufladbare 9V Batterie eingesetzt oder alternativ eine externe Stromquelle, die 9V Gleichstrom liefern kann.

Die folgenden Abschnitte enthalten alle nötigen Informationen für die Sicherheit des Bedieners beim Gebrauch des Geräts.

Funktionsprinzip

Die Einheit kann feststellen, ob die angeschlossene Pumpe aktiv ist oder nicht. Wenn die HS eingeschaltet ist, misst sie den Pumpenstrom:

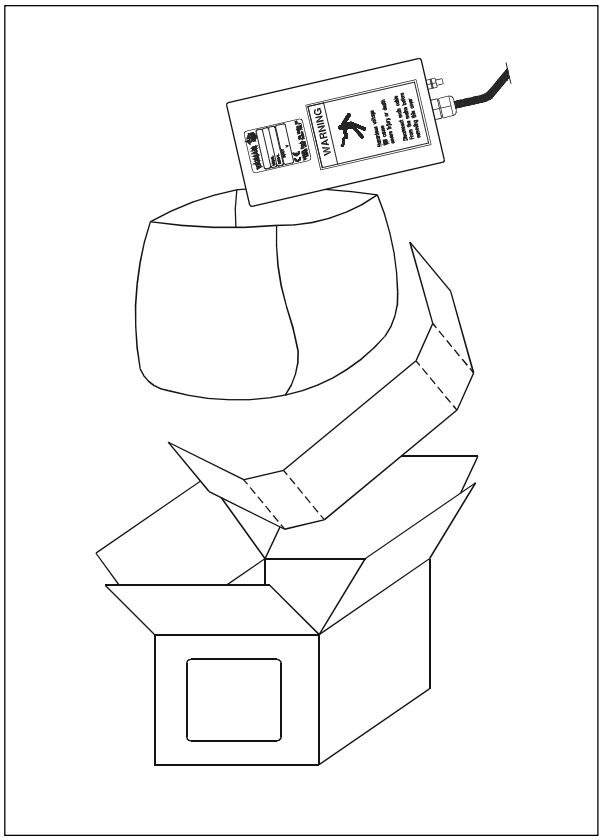
wenn der Strom unter 50 nA ist, ist die Entladung in der Pumpe aus (LED L1 blinkt rot);

wenn der Strom über 50 nA ist, ist die Pumpe an (LED L2 blinkt grün).

die Einheit erzeugt Hochspannung, die die Ionenpumpe versorgt, wenn der Stromschalter auf ON steht.

INSTALLATIONSVORBEREITUNGEN

Das Gerät wird in einer speziellen Schutzverpackung geliefert. Wenn Zeichen von Transportschäden entdeckt werden, das lokale Verkaufsbüro verständigen. Beim Auspacken besonders darauf achten, dass die Stromversorgung nicht fallen gelassen oder Stößen ausgesetzt wird. Die Verpackung nicht einfach wegwerfen. Sie ist völlig recyclebar und entspricht der EWG Umweltschutz-Richtlinie.



Verpackung der Stromversorgung

TECHNISCHE EIGENSCHAFTEN

Steuereinheit

Stromversorgung:

- eine handelsübliche nicht wiederaufladbare 9V Batterie vom Typ PP3 (6AM6, MN1604, 6LR61) - empfohlene Marke Duracell Plus

- ein Eingangsstecker zum Anschluss an einen Gleichrichter mit einem Ausgang von 9V= (+/- 10%)

ACHTUNG

Der negative Pol der 9V Versorgung ist auf dem mittleren Stift.
Der positive Pol der 9V Versorgung ist auf dem Außenmantel.

Ausgang:
- ungeregelte Spannung von 3,0 bis 1,5 Kv für 829-XXXX Modell und von –3,0 bis –1,5 kV für 729-XXXX Modell, je nach Ladungsstand der Batterie
- negative Ausgangspolung fabrikseitig eingestellt
- max. Ausgangsstrom: 1 µA (entspricht 5 und -9 mbar in einer Ionenpumpe 55L/S)
- max. Ausgangsleistung 3 mW

Bedienfeld:
- Ein-/Ausschalter
- zwei LEDs: L1 grün
  L2 rot

Die folgende Tabelle zeigt die Bedeutung der LED-Anzeigen.

	L1	L2
HS AN PUMPE AN	AUS	BLINKEND
HS AN PUMPE AUS	BLINKEND	AUS
BATTERIE LEER	AUS	AUS

Die beiden LEDs blinken im 2 Sek. Rhythmus (1,8 Sek aus, 0,2 Sek an).

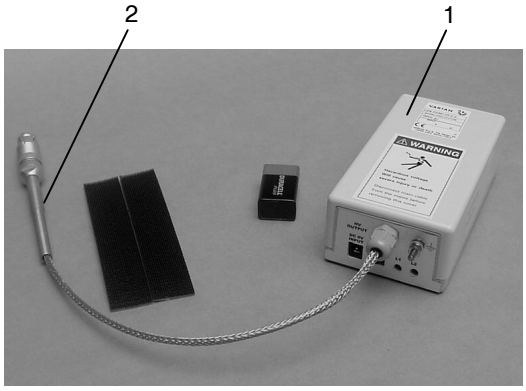
Bedienfeld

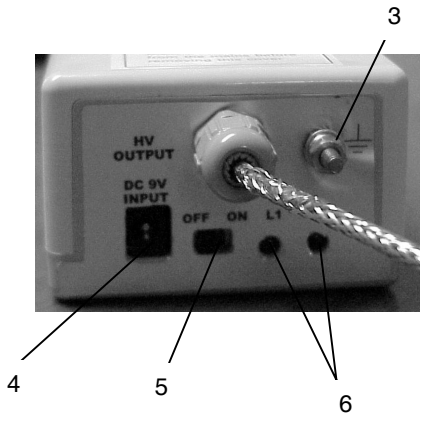
Einsatzdauer:
- min. 30 Tage bei Betrieb mit einem Ausgangsstrom von 1 µA

Anschluss:
- HS Kabel innen angeschlossen

Abmessungen:
- 150x80x55 mm

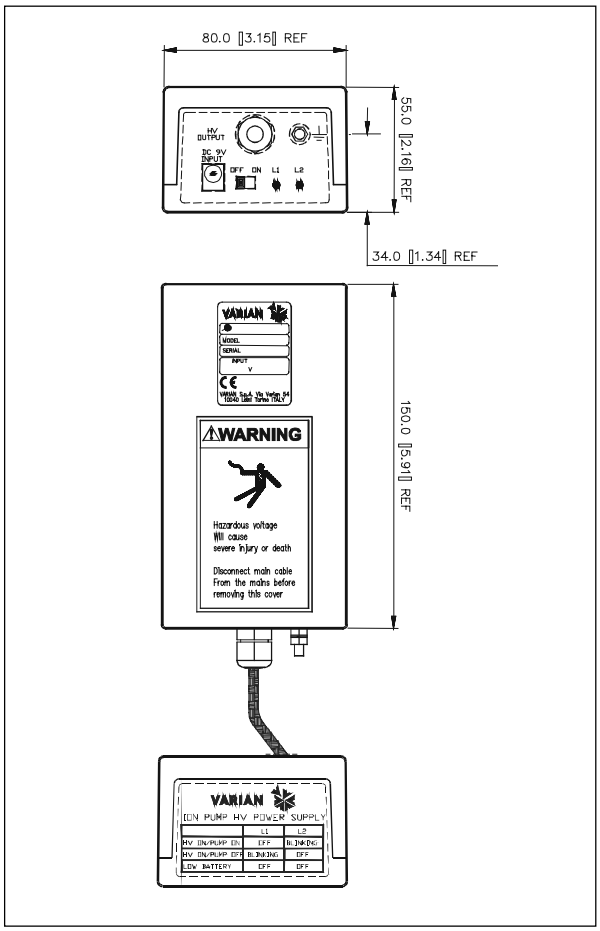
Ungebungsbedingungen:
- Lagertemperatur: –40 bis +85 °C
- Betriebstemperatur ist gleich der Betriebs-temperatur der Batterie
- rel. Luftfeuchtigkeit: 10% bis 90%
- Die Einheit wird mit negativer Ausgangspolung und gewünschtem Pumpensteckertyp geliefert.
- möglich sind 3 Pumpenanschlüsse.





1. Stromversorgungsgruppe
2. Versorgungsanschluss der Pumpe
3. Erdungsklemme
4. Eingangsstecker für externe Spannung
5. Ein-/Ausschalter
6. LEDs für den Betriebszustand

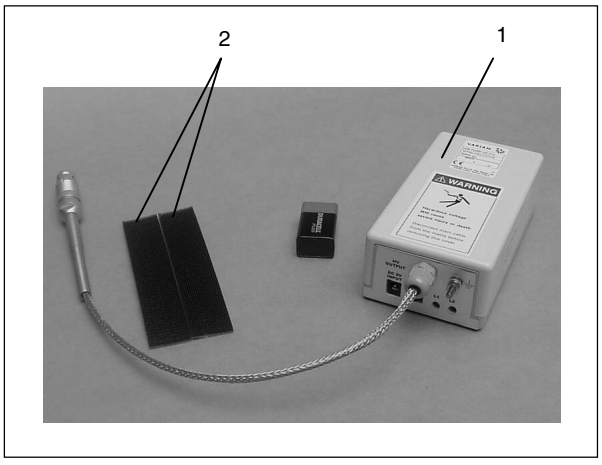
Die folgenden Abbildungen zeigen die Außenmaße der Stromversorgung.



Abmessungen in mm [Zoll]

INSTALLATION

Die Abbildung zeigt die Bauteile des Kits Ion Pump HV P.S.

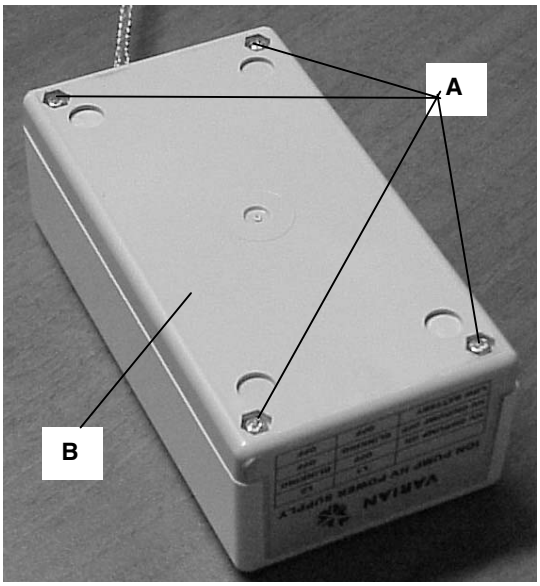


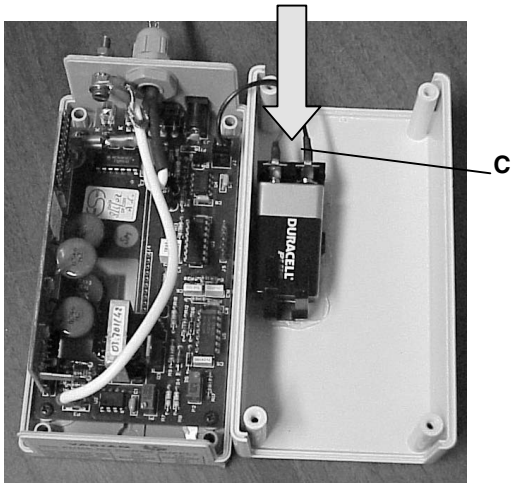
Kit Ion Pump HV P.S.

1. Ionenpumpe HV P.S.
2. Velcro Steifen zur Befestigung der P.S. Ionenpumpe am Pumpenkörper

Das Gerät wird mit eingesetzter Batterie geliefert. Die Kontakte sind jedoch mit Mylarstreifen isoliert.

Zum Anschluss der Batteriekontakte mit dem Kreis des Geräts müssen folgende Operationen vorgenommen werden:

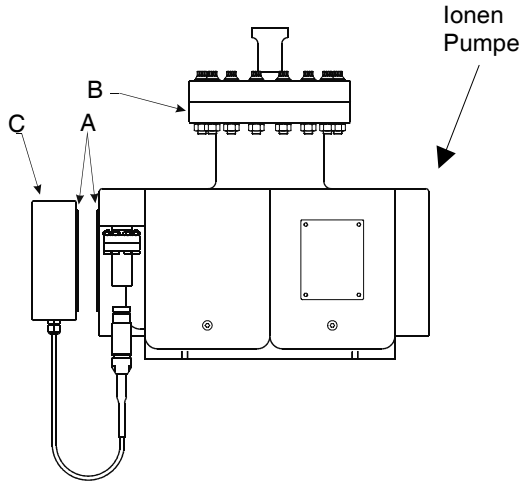




- Sicherstellen, das der Ein-/Ausschalter auf OFF steht.
- Die 4 Schrauben **A** abschrauben.
- Den Deckel der Einheit öffnen.
- Den Mylarstreifen zwischen den Batteriekontakten und denen der Batteriehalterung **C** herausziehen.
- Den Deckel der Einheit wieder aufsetzen und die 4 Schrauben **A** wieder einsetzen.

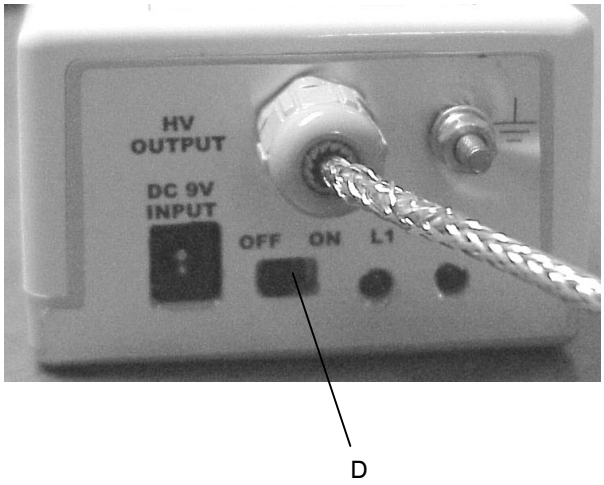
Jetzt das Gerät auf der Pumpe positionieren.

- Einen Velcro Streifen auf der Pumpe **B** festkleben, den anderen auf der Stromversorgung **C**, dann die beiden Einheiten aneinander stecken.



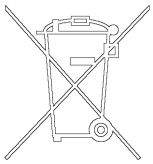
Befestigung an der Pumpe

- Die Stromversorgung elektrisch an die Pumpe anschließen.
- Den Schalter **D** auf ON stellen.



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.



FEHLERSUCHE

STÖRUNG	MÖGLICHE URSACHE	BEHEBUNG
1) Bei Schalter auf ON sind die LEDs aus.	- Batterie leer.	- Batterie ersetzen
2) Bei Schalter auf ON blinkt LED 1 und LED 2 ist aus.	- Der Versorgungsstrom der Pumpe ist < 50 nA. Die Entladung ist nicht gestartet und die Pumpe arbeitet nicht.	- Den Innendruck der Pumpe erhöhen (z.B. durch Erwärmen der Pumpe), bis die Entladung startet; an diesem Punkt geht LED 1 aus und LED 2 beginnt zu blinken.

PROCEDURE POUR L'INSTALLATION DE L'ALIMENTATEUR ION PUMP HV P.S.

GENERALITE

Cet appareillage est destiné à un usage professionnel. L'utilisateur doit lire attentivement le présent manuel d'instructions et toute information supplémentaire fournie par Varian avant d'utitliser l'appareillage. Varian décline toute responsabilité quant à l'inobservance totale ou partielle des instructions, à l'utilsation abusive de la part d'un personnel non préparé, ainsi qu' aux interventions non autorisées ou à l'utilisation contraire aux réglementations nationales spécifiques.

L'appareillage ION Pump HV P.S. est un alimentateur et il est utilisé pour alimenter les pompes ioniques durant les phases de transport, afin d'empêcher l'entrée de l'air à l'intérieur de la pompe même.

L'alimentateur utilise une pile non rechargeable de 9 V, placée à l'intérieur ou en alternative, il peut être branché à une source extérieure en mesure de fournir une tension continue à 9 V avec une majeure autonomie.

Dans les paragraphes suivants sont reportées toutes les informations nécessaires pour garantir la sécurité de l'opérateur durant l'utilisation de l'appareil.

Principe de fonctionnement

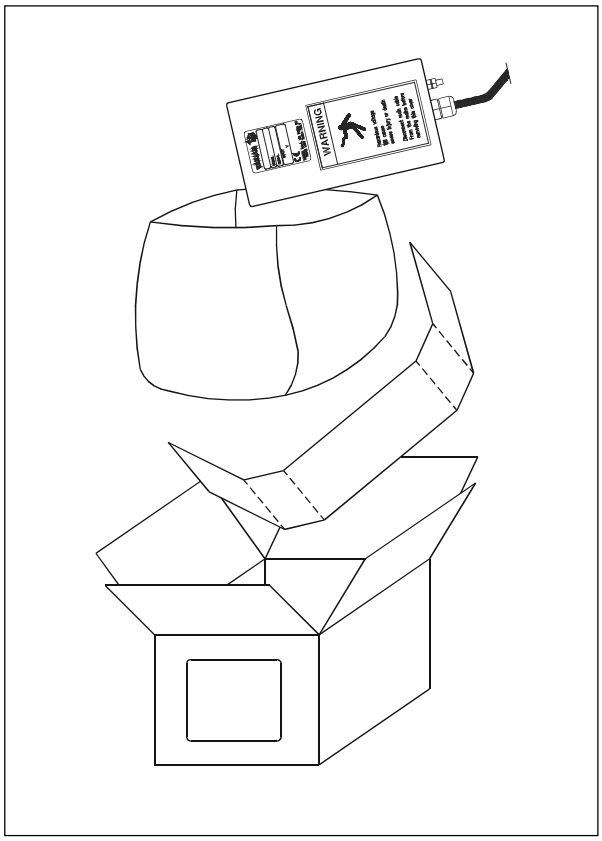
L'unité est en mesure de déterminer si la pompe branchée est active ou pas. Lorsque le HV est allumé, l'unité mesure le courant de la pompe:

si le courant est inférieur à 50 nA, la décharge à l'intérieur de la pompe est éteinte (voyant LED L1 rouge clignotant);
si le courant est supérieur à 50 nA, la pompe est opérationnelle (voyant LED L2 vert clignotant).

L'unité génère l'HV qui alimente la pompe ionique lorsque l'interrupteur de l'alimentation est placé sur ON.

PREPARATION POUR L'INSTALLATION

Le dispositif est fourni dans un emballage de protection spécial; si l'appareil a subi des endommagements qui ont pu avoir lieu durant le transport, contacter le bureau d'achats local. Durant l'opération de déballage, faire attention à ne pas faire tomber l'alimentateur et à ne pas le soumettre à des heurts. Ne pas laisser l'emballage dans la nature. Le matériau est complètement recyclable et répond à la directive CEE 85/399 pour la sauvegarde de l'environnement.



Emballage de l'alimentateur

CARACTERISTIQUES TECHNIQUES

Unité de contrôle

Alimentation:

- une batterie non rechargeable du type PP3 à 9V (6AM6, MN1604, 6LR61) disponible commercialement (type conseillé Duracell Plus).

- un connecteur d'entrée pour le branchement à un convertisseur CA/CC avec sortie CC à 9 V (+/- 10%)

ATTENTION

l'électricité négative à 9 V est sur la broche centrale l'électricité positive à 9 V est sur le branchement externe.

Sortie:

- Tension non réglée de 3.0 à 1.5 kV pour 829-XXXX et de –3,0 à –1,5 kV pour 729-XXXX selon le niveau de chargement de la batterie
- Polarité de sortie négative établie à l'usine
- Courant maximum en sortie: 1 µA (correspondant à 5 e - 9 mbar dans une pompe ionique 55L/S)
- mbar in einer Ionenpumpe 55L/S)
- Puissance maximum en sortie: 3 mW

Tableau de contrôle:

- Interrupteur d'alimentation
- Deux voyants LED: L1 vert
  L2 rouge

Le tableau suivant fournit la signification des configurations prises par les voyants LED.

	L1	L2
HV ALLUME POMPE ALLUMEE	ETEINT	CLIGNOTANT
HV ALLUME POMPE ETEINTE	CLIGNOTANT	ETEINT
BATTERIE A PLAT	ETEINT	ETEINT

Les deux voyants clignotent toutes les deux secondes (1.8 secondes éteint, 0.2 secondes allumé).

Tableau

Vie:

- Minimum 30 jours d'activité avec un courant en sortie égal à 1 µA

Branchement:

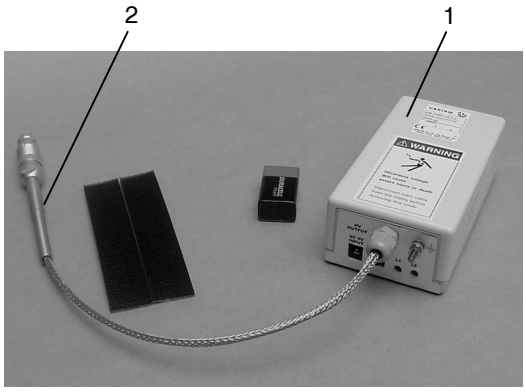
- Câble HV branché à l'intérieur

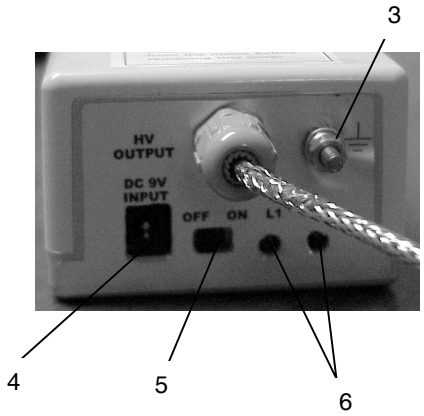
Dimensions:

- 150x80x55 mm

Conditions ambiantes:

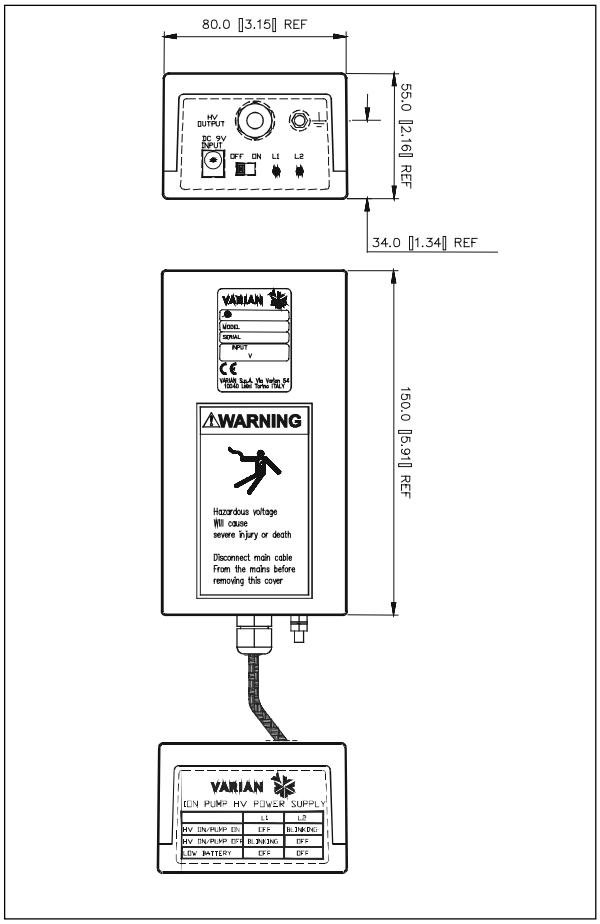
- Température d'emmagasinement : de –40 à +85 °C
- Température opérationnelle égale à la température opérationnelle de la batterie
- Humidité relative: de 10% à 90%
- L'unité est fournie avec une polarité de sortie négative et type de connecteur pompe requis.
- L'unité peut être fournie avec trois différents connecteurs pompe.





1. Groupe alimentateur
2. Connecteur d'alimentation pompe
3. Borne au sol
4. Connecteur entrée tension externe
5. Interrupteur ON/OFF
6. Voyant Led de signalisation condition opérationnelle

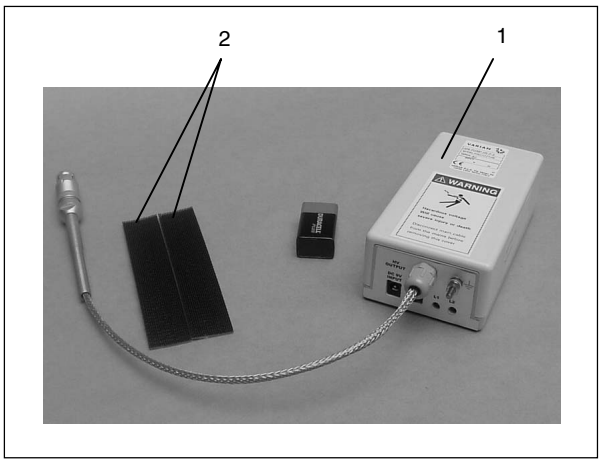
La figure suivante reporte les dimensions d'encombrement de l'alimentateur.



Dimensions in mm [pouces]

INSTALLATION

Dans la figure sont reportés les différents composants présents dans le kit Ion Pump HV P.S.

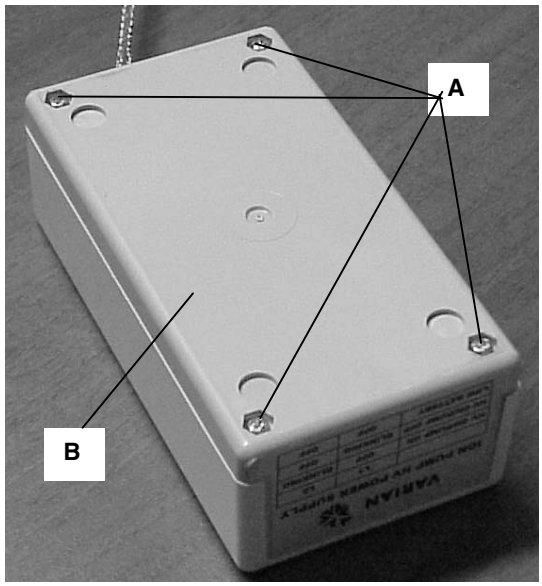


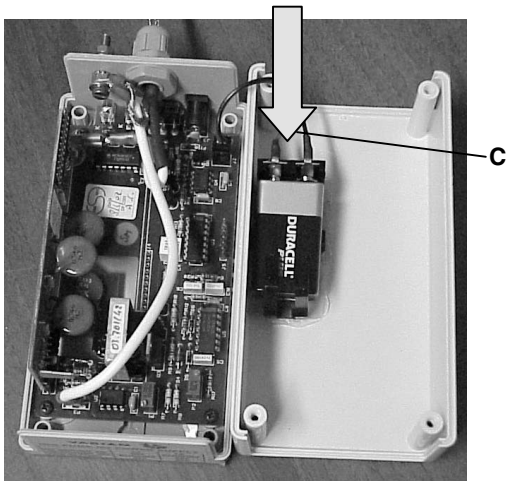
Kit Ion Pump HV P.S.

1. Ion Pump HV P.S.
2. Bandes velcro pour fixage Ion Pump P.S. au corps pompe

Le dispositif est expédié avec la batterie insérée dans le logement mais avec les contacts isolés par une bande de mylar isolante.

Pour établir le contact entre les bornes de la batterie et le circuit du dispositif, effectuer les opératoins suivantes:

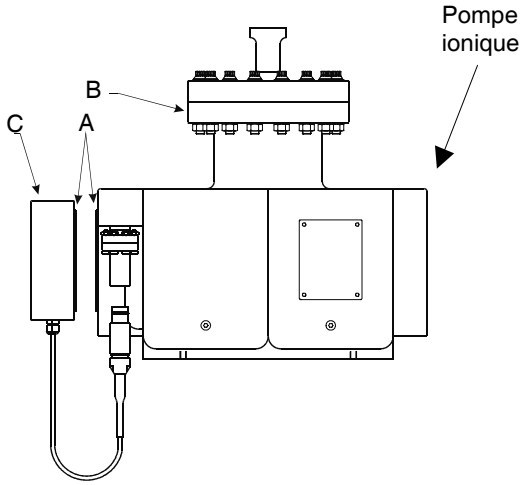




- Vérifier que l'interrupteur ON/OFF soit sur la position OFF.
- Dévisser les 4 vis **A**.
- Ouvrir le couvercle de l'unité.
- Enlever la bande en mylar insérée entre les bornes de la batterie **C** et les contacts du porte-batterie.
- Repositionner le couvercle de l'unité et réinsérer les 4 vis **A**.

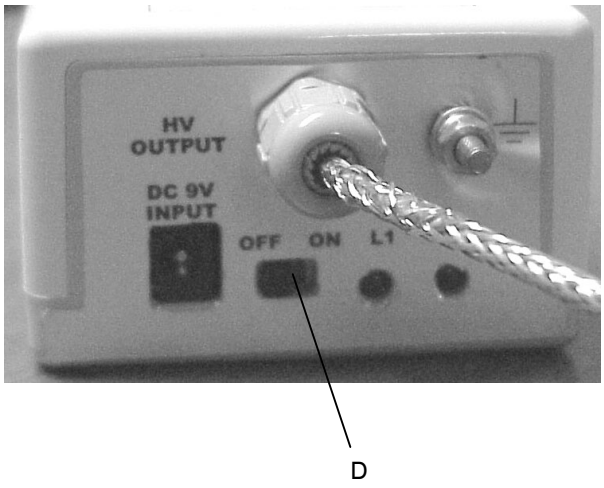
Effectuer maintenant le positionnement sur la pompe.

- Coller les deux bandes de velcro **A**, une sur la pompe **B** et l'autre sur l'alimentateur **C**, ensuite fixer entre eux les deux dispositifs.



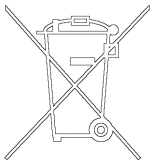
Fixage sur la pompe

- Relier électriquement l'alimentateur et la pompe.
- Porter l'interrupteur **D** sur la position ON.



MISE AU REBUT

Signification du logo "WEEE" figurant 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.



RECHERCHE PANNES

ANOMALIE	CAUSE POSSIBLE	ACTION DE CORRECTION
1) Avec l'interrupeur en position ON, les voyants LED sont tous éteints	- Batterie à plat.	- Remplacer la batterie
2) Avec l'interrupteur en position ON, le voyant LED 1 clignote et le voyant LED 2 est éteint.	- Le courant qui alimente la pompe est < 50 nA. La décharge ne démarre pas et la pompe n'est pas opérationnelle.	- Augmenter la pression à l'intérieur de la pompe (par ex. en réchauffant la pompe jusqu'à ce que la décharge n'est pas activée; c'est alors que le voyant LED 1 s'éteint et que le voyant LED 2 commence à clignoter.

ION PUMP HV P.S.

POWER SUPPLY UNIT INSTALLATION PROCEDURE

OVERVIEW

This appliance is intended for professional use only. Before using the appliance, the user must read this instructions manual carefully and any other additional information provided by Varian. Varian declines any responsibility for total or partial non-compliance with the instructions, improper use by untrained personnel, unauthorized operations or use contrary to specific national regulations.

Ion Pump HV P.S. is a power supply that is used to power ion pumps during transportation phases in order to prevent air entering the pump.

The power supply uses a 9V non-rechargeable battery positioned inside or, alternatively, may be connected to an external power source able to provide a DC voltage of 9 V with greater autonomy.

All the information required to guarantee operator safety during use of the appliance is provided below.

Principle of operation

The unit is able to determine whether or not the pump connected is active. When the HV is ON, the unit measures pump current:

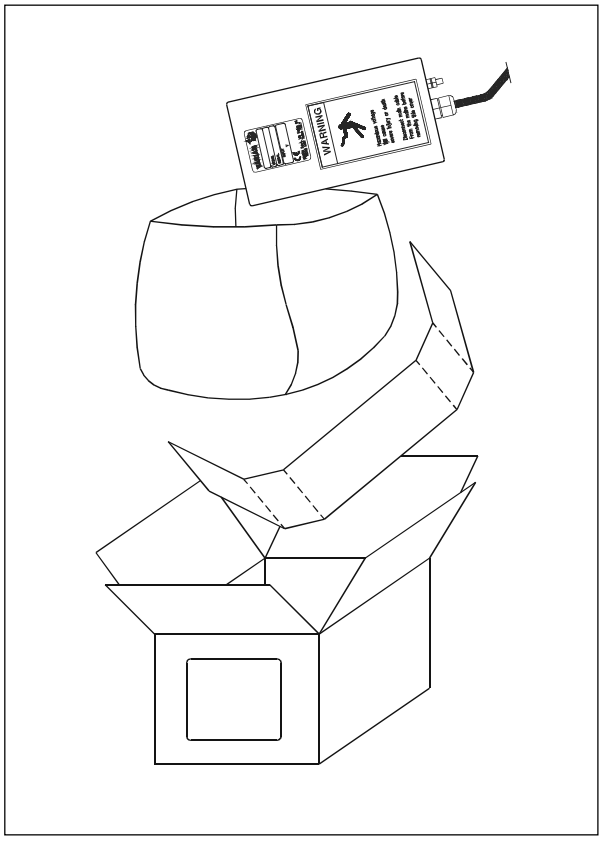
if the current is less than 50 nA, the discharge inside the pump is OFF (red LED L1 blinking);

if the current exceeds 50 nA, the pump is operative (green LED L2 blinking).

The unit generates the HV that powers the ion pump when the power switch is set to ON.

PREPARATION FOR INSTALLATION

The device is furnished in special protective packaging; if there are any signs of damage to this packaging during transport, contact your local sales office. When unpacking the unit, take particular care to prevent any yielding of the power supply and any impacts. Do not dispose of the packaging in the environment. The material is fully recyclable and complies with EC Directive 85/399 for protection of the environment.



Packaging of the power supply

TECHNICAL DATA

Control unit

Power supply:

- a commercially available 9V PP3 type non-rechargeable battery (6AM6, MN1604, 6LR61) (recommended type Duracell Plus).

- an input connector for connection and a 9V AC/DC converter (+/- 10%)

WARNING

The negative of the 9V power supply is on the central pin
The positive of the 9V power supply is on the external connection.

Output:

- Non regulated voltage of between 3.0 and 1.5 kV for 829-XXXX and from –3,0 to –1,5 kV for 729-XXXX according to battery charge level
- Factory-set negative output polarity
- maximum output current 1 µA (corresponding to 5 and - 9 mbar in a 55/LS ion pump)
- Max. output power: 3 mW

Control panel:

- Power ON/OFF switch
- Two LEDs: L1 green
  L2 red

The meaning of the configurations of the LEDs is shown in the table.

	L1	L2
HV ON PUMP ON	OFF	BLINKING
HV ON PUMP OFF	BLINKING	OFF
BATTERY DISCHARGED	OFF	OFF

The two LEDs blink at a frequency of 2 seconds (1.8 second off, 0.2 seconds on).

Panel

Life:

- Minimum 30 days of operation with an output current of 1 µA

Connection:

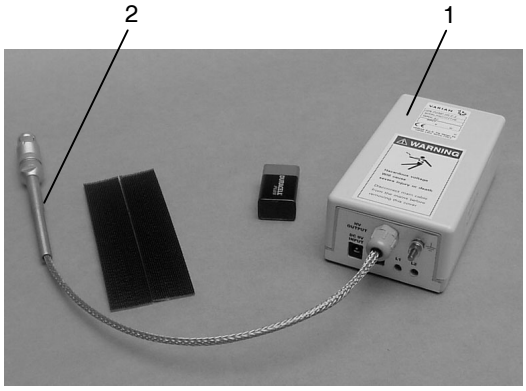
- HV cable connected internally

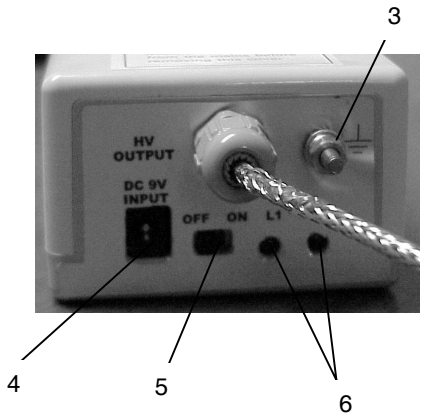
Dimensions:

- 150x80x55 mm

Environmental conditions:

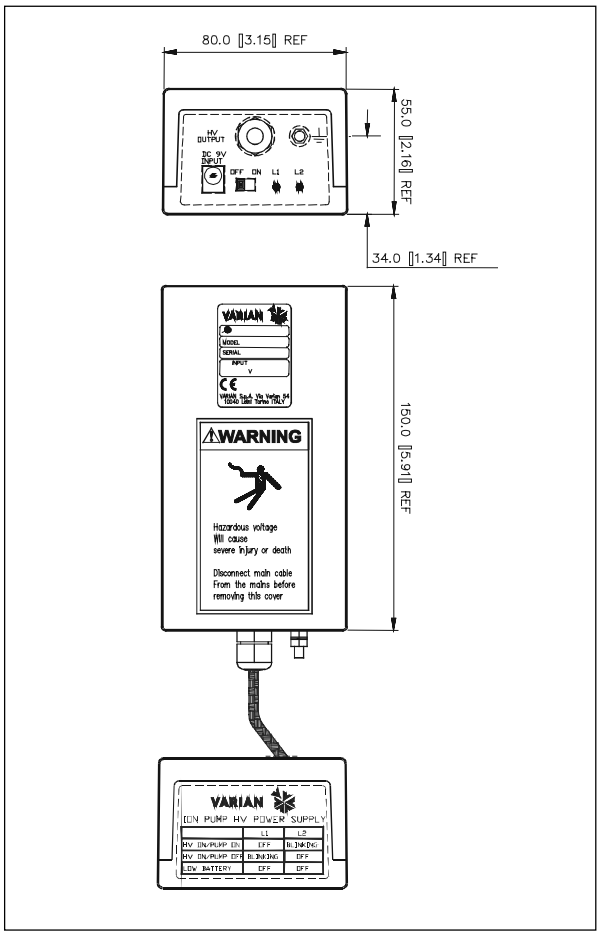
- Storage temperature: from –40 to +85 °C
- Operating temperature equal to the operating temperature of the battery
- Relative humidity: from 10% to 90%
- The unit is furnished with the negative output polarity and type of connector requested.
- The unit may be supplied with three different pump connectors.





1. Power supply unit
2. Pump power connector
3. Ground terminal
4. External voltage input connector
5. ON/OFF switch
6. Operating state readout led

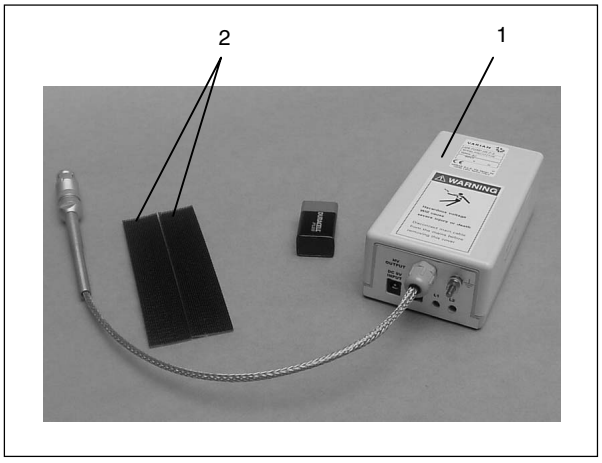
The overall dimensions of the power supply are shown in the figure below.



Dimensions in mm [inches]

INSTALLATION

The various components of the Ion Pump HV P.S. kit are shown in the figure below:

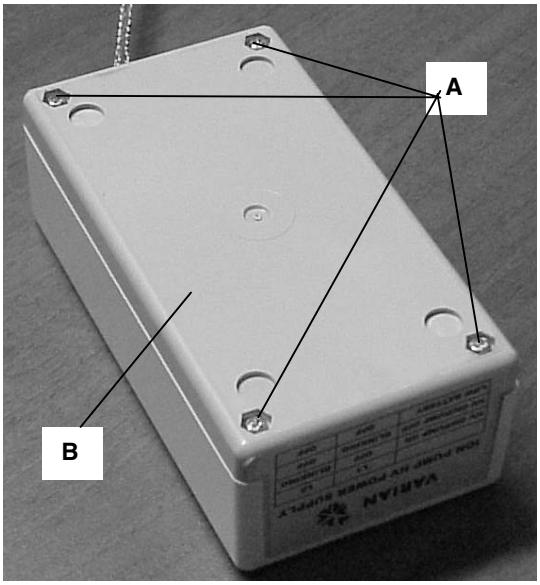


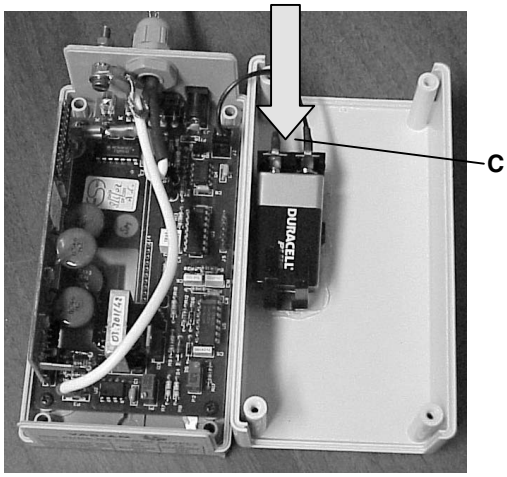
Ion Pump HV P.S. Kit

1. Ion Pump HV P.S.
2. Strip of Velcro to fasten the Ion Pump P.S. to the pump body

The device is dispatched with the battery inserted in its housing but with the contacts isolated by a strip of insulating Mylar.

To establish contact between the terminals of the battery and the circuit of the device, proceed as follows:

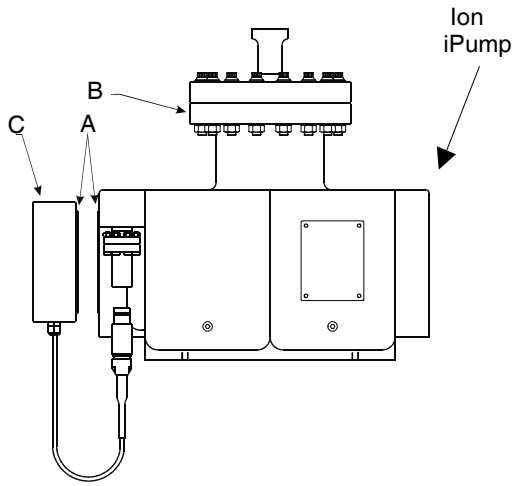




- Check that the ON/OFF switch is set to OFF.
- Back off the 4 screws **A**.
- Open the cover of the unit.
- Remove the strip of Mylar inserted between the terminals of the battery **C** and the contacts of the battery-holder.
- Replace the cover of the unit and re-insert the four screws **A**.

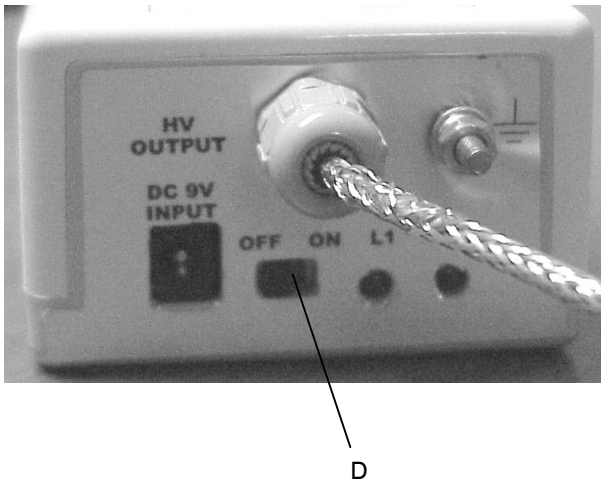
Proceed with positioning on the pump.

- Glue two strips of Velcro **A**, one on the pump **B** and the other on the power supply **C**, and then fasten the two devices together.



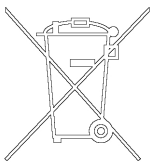
Fastening on the pump

- Make the electric connection between the power supply and pump.
- Turn switch **D** to ON.



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.



TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	FIXING
1) With the switch in ON position, no LED are ON.	- The battery is exhausted.	- Change the battery.
2) With the switch in ON position, the LED L1 is blinking and L2 is OFF.	- The current that supplies the pump is < 50 nA. Discharge is not activated and the pump does not work.	- Increase the pressure inside the pump (ex. by heating the pump), discharge is activated and L1 goes OFF and L2 starts blinking.

VARIAN

Request for Return

ISO 9001 REGISTERED

1. A Return Authorization Number (RA#) **WILL NOT** be issued until this Request for Return is completely filled out, signed and returned to Varian Customer Service.
2. Return shipments shall be made in compliance with local and international **Shipping Regulations** (IATA, DOT, UN).
3. The customer is expected to take the following actions to ensure the **Safety** of workers at Varian: (a) Drain any oils or other liquids, (b) Purge or flush all gasses, (c) Wipe off any excess residues in or on the equipment, (d) Package the equipment to prevent shipping damage, (for Advance Exchanges please use packing material from replacement unit).
4. Make sure the shipping documents clearly show the RA# and then return the package to the Varian location nearest you.

North and South America	**Europe and Middle East**	**Asia and ROW**
Varian Vacuum Technologies 121 Hartwell Ave Lexington, MA 02421 Phone : +1 781 8617200 Fax: +1 781 8609252	Varian SpA Via Flli Varian 54 10040 Leini (TO) – ITALY Phone: +39 011 9979111 Fax: +39 011 9979330	Varian Vacuum Technologies Local Office

CUSTOMER INFORMATION

Company name: ……

Contact person: Name: …… Tel: ……

Fax: …… E-Mail: ……

Ship Method: …… Shipping Collect #: …… P.O.#: ……

Europe only: VAT reg. Number: …… *USA only:* ☐ Taxable ☐ Non-taxable

Customer Ship To: …… Customer Bill To: ……

……

……

……

……

PRODUCT IDENTIFICATION

Product Description	Varian P/N	Varian S/N	Purchase Reference

TYPE OF RETURN *(check appropriate box)*

☐ Paid Exchange ☐ Paid Repair ☐ Warranty Exchange ☐ Warranty Repair ☐ Loaner Return
☐ Credit ☐ Shipping Error ☐ Evaluation Return ☐ Calibration ☐ Other ……

HEALTH and SAFETY CERTIFICATION

Varian Vacuum Technologies **CAN NOT ACCEPT** any equipment which contains **BIOLOGICAL HAZARDS** or **RADIOACTIVITY**. Call Varian Customer Service to discuss alternatives if this requirement presents a problem.

The equipment listed above (check one):

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

OR

☐ **HAS** been exposed to any toxic or hazardous materials. In case of this selection, check boxes for any materials that equipment was exposed to, check all categories that apply:

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

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

……

Print Name: …… Customer Authorized Signature: ……

Print Title: …… Date: ……/……/……

NOTE: If a product is received at Varian 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 Varian employees as well as to any third party occurring as a result of exposure to toxic or hazardous materials present in the product.

Do not write below this line

Notification (RA)#: …… Customer ID#: …… Equipment #: ……

VARIAN

Request for Return

ISO 9001 REGISTERED

FAILURE REPORT

TURBO PUMPS and TURBOCONTROLLERS

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

TURBOCONTROLLER ERROR MESSAGE:

ION PUMPS/CONTROLLERS

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

Customer application:

VALVES/COMPONENTS

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

Customer application:

LEAK DETECTORS

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

Customer application:

INSTRUMENTS

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

Customer application:

PRIMARY PUMPS

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

Customer application:

DIFFUSION PUMPS

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

Customer application:

FAILURE DESCRIPTION

(Please describe in detail the nature of the malfunction to assist us in performing failure analysis):

NOTA: Su richiesta questo documento è disponibile anche in Tedesco, Italiano e Francese.
REMARQUE : Sur demande ce document est également disponible en allemand, italien et français.
HINWEIS: Auf Aufrage ist diese Unterlage auch auf Deutsch, Italienisch und Französisch erhältlich.

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