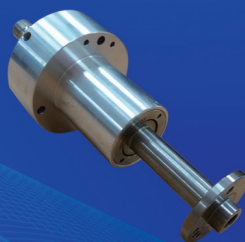
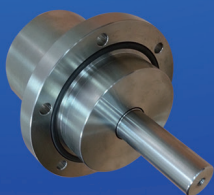
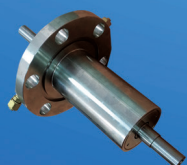


應用奈米科技股份有限公司  
APPLIED NANO TECHNOLOGY SCIENCE, INC.

## General Catalog



**Specialty Vacuum (transport)  
Components Supplier**



## 前言

應用奈米科技股份有限公司成立於西元**2001**年元月，是一個以奈米科技應用技術研發為主要導向，提供工業技術服務與產品的營利組織。我們共同的願景是成為立足於全球產業設計製造中心－台灣，放眼世界市場奈米科技應用的產品製造及技術服務公司。

**2003**年應用奈米科技於磁性奈米流體**Ferromagnetic Fluid**製程有革命性突破，加上專業透徹的研發及製造技術的演進，成功製作出真空設備用之磁流體軸封，為一種進行真空/大氣間密封，同時可將動力由大氣傳遞進真空的關鍵零組件，打破了過去由少數供應商壟斷的局面，應用奈米科技開發出的磁流體軸封一系列產品，提供真空設備業與真空設備使用者一個獨立的新供應來源。

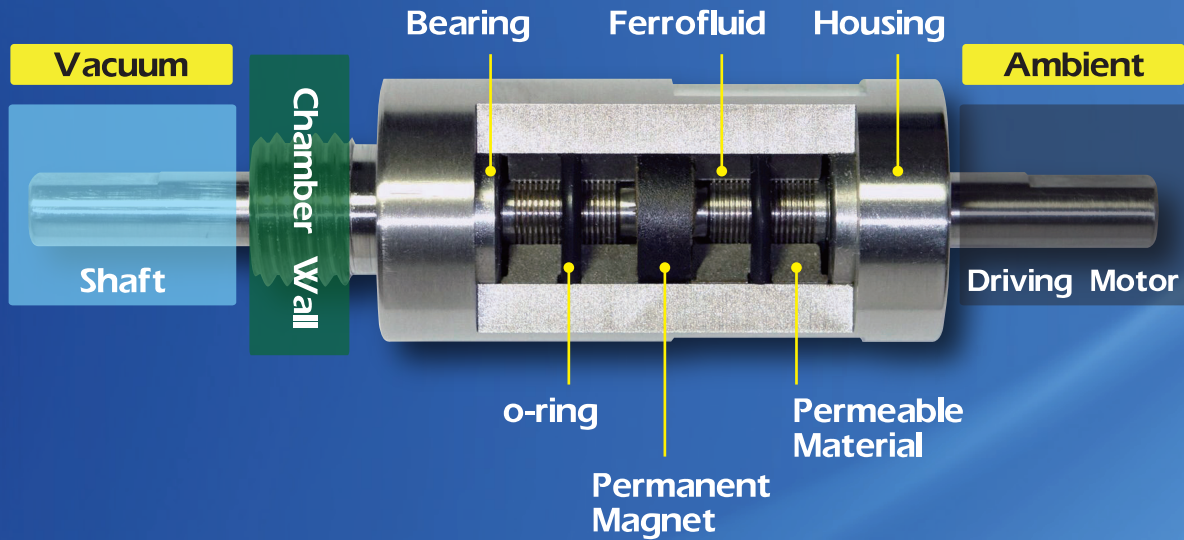
基於磁流體軸封技術是由應用奈米科技自行開發、製造，我們具有完整的軸封開發、製造與產品維修測試的能力，提供市售及特殊磁流體軸封客製化與維修的服務。

**Established in January 2001, Applied Nano Technology Science, Inc. (ANTS) is a company dedicating to specialty component manufacturing and technology research & development of vacuum and nanotechnology applications and is mainly oriented to provide products and technical services to customers. Based on the global industrial design and manufacturing center - Taiwan, we are open to the world market on applications of vacuum and nanotechnology.**

**In 2003, ANTS succeeded to debut Taiwan's first Magnetic Rotary Feedthrough in view of Nano-scale ferromagnetic fluid synthesizing revolution coupled with professional R & D and manufacturing technology breakthroughs. Magnetic Rotary Feedthrough, playing as a vacuum / ambient sealing interface, while transferring power from ambient into vacuum, is a critical vacuum components for tremendous applications.**

**ANTS enrolled a series of Magnetic Rotary Feedthroughs to provide vacuum equipment users and vendors an independent brand-new source. Since Magnetic Rotary Feedthrough is developed independently by ANTS, we possess a complete set of diversity capabilities, from manufacturing, maintenance to development and test to provide commercial and specialty Magnetic Rotary Feedthrough customization and maintenance services.**

## 磁流體軸封的構造 Feedthrough Structure



## 磁流體軸封的優點

### Advantages of Magnetic Rotary Feedthrough

- 壽命較長  
Long lifetime
- 無摩擦力/ 無粉塵  
No friction / no particle
- 低耗能  
Low power consumption
- 高真空/高轉速/高溫下具高信賴性  
High vacuum / high rpm / high reliability at high temperature





## 1. 什麼是磁流體？

磁流體是由磁性微粒，界面活性分子與基礎載液所組成。磁性微粒為奈米（nanometer,  $10^{-9}$  公尺）級的鐵磁分子，以界面活性分子披覆，均勻分散於基礎載液中，有如一團流動的鐵磁物質。當受到外加磁場的影響，會沿著磁力線分佈形成各種形狀。若在微小的間隙中，外加以磁場，置入磁流體，將形成一堵隔絕兩側環境屏障。

## 2. 磁流體如何形成軸封？

磁流體軸承的軸封部份，由磁石、導磁環與可導磁的旋轉軸形成磁力環路，將磁流體置於導磁環與旋轉軸的間隙，受磁力環路的拘束，可形成阻絕大氣進入真空腔體的環型屏障。

## 3. 為何磁流體軸封比橡膠軸封耐久？

磁流體軸封與傳統O型封環不同，磁流體對旋轉軸不產生摩擦。利用磁流體作為軸封材料，有如『液態O型封環』，在旋轉軸上形成阻絕大氣進入真空腔體的環型屏障，較之以傳統橡膠封環技術，具有不易磨損、無微屑汙染、高速低滯等優點。正常使用下，可以數年不須保養或置換。

## 4. 磁流體軸封可以在高溫環境下運作嗎？

磁流體軸封內的永久磁石及磁流體無法忍受在超過其特性溫度下操作。永久磁石溫度上限在  $120^{\circ}\text{C}$  左右，而以碳氫化合物為基礎的磁流體，安全溫度上限在  $150^{\circ}\text{C}$  左右。除非有適當的冷卻設計，千萬不可超出溫度上限操作。必須在高溫下操作時，請考慮使用 AW 系列水冷式磁流體軸封。

## 5. 使用磁流體的限制

磁流體軸封的外殼以非磁性不鏽鋼材料製作，以屏蔽磁力對附近的電磁元件的影響。在使用磁流體軸封時，必需注意週圍 20 公分以內的電磁元件佈局。外在的強力磁場，也可能影響磁流體軸封之正常運作。

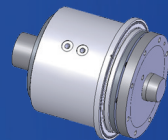
長時間靜置的磁流體軸封，在進入施加壓力差及全速運轉前，必須先行轉動數圈，讓磁流體在磁場中能均勻分佈，以延長磁流體軸封的使用壽命。

初次使用經長時間靜置的磁流體軸封，轉軸因為磁流體中磁性微粒的有序排列，磁性增強，會較平常時難以轉動。在進入正常運轉前，必須先行轉動一、二圈，增加磁性微粒的亂度，以降低磁性及轉動之轉矩。訂定驅動馬達規格時，請注意其啟動轉矩要在  $4\text{ kgf}\cdot\text{cm}$  以上。

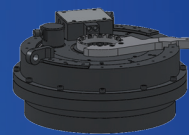
磁流體軸封因應不同環境之需求，會有不同基礎載液的磁流體。一般用於真空軸封的磁流體，不能用於流體或化學蒸氣的密封。如有特殊的環境需求，必需選用不同化學特性的磁流體。

軸封兩側的軸承，通常是高速轉動下的熱源所在。為保持磁石的永久磁性，切勿超過規格的最高轉速。較常溫為高的大氣溫度，會降低磁石在高速轉動下的耐溫程度。

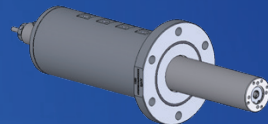
SEMICON



FPD



LED



## 1.What is Ferrofluid ?

Ferrofluid is composed of magnetic nanoparticles, surfactant and carrier fluid. Nanoparticles are nano-scale ferro materials. They will be coated by surfactant then to disperse homogenously in carrier fluid acting together as a magnetic liquid. When Ferrofluid is magnetized by magnetic field, Ferrofluid will be shaped according to the magnetic lines. If Ferrofluid is placed in a small vacancy and contained by magnetic field, a seal will be formed to separate ambient to the other.

## 2.How is Ferrofluid composed into a Magnetic Rotary Feedthrough ?

The seal of Magnetic Rotary Feedthrough is composed by Permanent Magnet, Permeable rings and shaft. The Ferrofluid is placed and confined within designed magnetic field to act as a seal in between vacuum and ambient.

## 3.Why is Magnetic Rotary Feedthrough durable than common O-ring seal ?

Magnetic Rotary Feedthrough is distinguished from traditional O-ring seal. Magnetic Rotary Feedthrough is running with Ferrofluid as a liquid O-ring resulting in no solid friction to shaft. The advantages are no friction, no particle contamination, low driving force at high rpm. Magnetic Rotary Feedthrough can run well for years.

## 4.Is Magnetic Rotary Feedthrough working well in high-temperature conditions ?

The permanent magnet and Ferrofluid in Magnetic Rotary Feedthrough is not supposed to run at temperature higher than specification. The upper limit for permanent magnet and Hydrocarbon Ferrofluid are at around  $120^{\circ}\text{C}$  and  $150^{\circ}\text{C}$ , respectively. Nevertheless, if the operating condition is over the specification, a cooling system or circuit could be implemented to protect the critical parts. The "W" series in "cooling" column of specification table are feasible to such applications.

## 5.Limitations to Magnetic Rotary Feedthrough applications.

The housing of Magnetic Rotary Feedthrough is made of non-magnetic material to barrier the magnetic field inside the housing to prevent any influence to neighboring electric-magnetic devices. Vice versa, neighboring massive magnetic field will possibly impact the function of Magnetic Rotary Feedthrough. A 20 cm range should be noted in caution.

A long time steady Magnetic Rotary Feedthrough should manually rotate for a while before running with bias pressure and full speed. The manual rotation could homogenize again the Ferrofluid inside.

When you unpack Magnetic Rotary Feedthrough, it might be stored for a while in your warehouse and you should manually rotate several turns to homogenize the Ferrofluid. The nanoparticles could stacked together tightly after long steady deposition, therefore, it's recommended to rotate a bit to disturb the distribution to reduce the initiating torque of the Magnetic Rotary Feedthrough. When a motor is connected to Magnetic Rotary Feedthrough, the motor rotating torque should be larger than  $4\text{ kgf}\cdot\text{cm}$ .

Magnetic Rotary Feedthrough is designed and fit to different operating conditions with different Ferrofluid. A Magnetic Rotary Feedthrough for common vacuum application is not suitable for liquid or chemical vapor applications. The design and material selection is defined according to different operating conditions.

Bearings in the Magnetic Rotary Feedthrough is the heat source during high speed rotation, therefore, the rotation rpm should be kept lower than specification and ambient temperature should be put into consideration to avoid over heat.





## 軸封的應用範圍

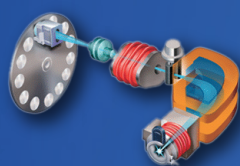
The feedthrough application for diversity industries

- 爐管 Furnace
- 蝕刻 Etcher
- 物理氣相沉積 PVD
- 捲對捲 Roll-to-Roll
- 化學氣相沉積 CVD
- 真空機械手臂 Vacuum Robot
- 離子植入 Implanter
- 長晶爐 Crystallizer
- 有機金屬化學氣相沉積 MOCVD

Vacuum robot



Implanter



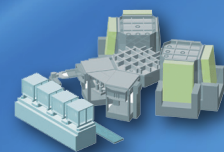
PVD



Furnace



Cluster Sputter



In-line Sputter



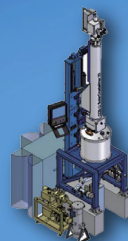
MOCVD



Roll-to-Roll



Crystallizer



In-line PVD



## 關於軸封服務

About rotary feedthrough service

### Refurbishment:

Customer >> Information >> ANTS >> Disassembly >> Assessment >> Feedback >> Approve >> Overhaul >> OQC >> Customer

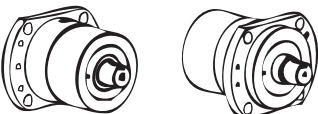
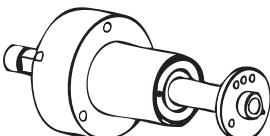
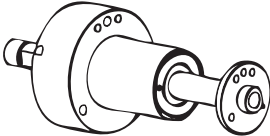

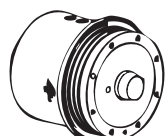
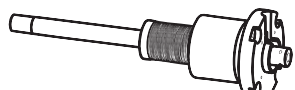
### ODM:

Customer >> Request >> ANTS >> Assessment >> Quotation >> Approve >> Manufacturing >> OQC >> Customer





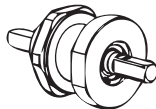
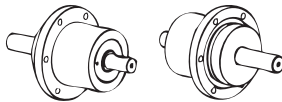
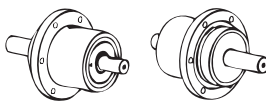
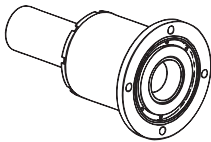
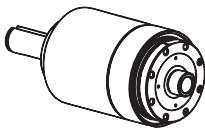
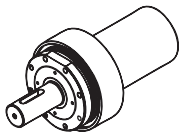
# 半導體用軸封 Feedthrough for SEMICON

1	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0020W/MR00001		半導體製程擴散爐 DIFFUSION
	原廠型號 original model		
	806HS		
2	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0625AMN00001		離子植入機 IMPLANTER
	原廠型號 original model		
	52-120755J		
3	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0625AMN00002		離子植入機 IMPLANTER
	原廠型號 original model		
	52-120756H		
4	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XNS0020CNX00001		半導體製程擴散爐 DIFFUSION
	原廠型號 original model		
	N/A		
5	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0105W/NH00001		離子植入機 IMPLANTER
	原廠型號 original model		
	52-121187C		
6	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	BXX1000CMN00001		化學氣相沉積 PECVD
	原廠型號 original model		
	52-131938C		



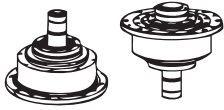
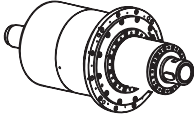
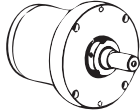
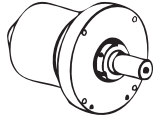
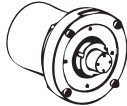
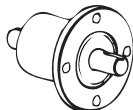


# 發光二極體及太陽能用軸封 Feedthrough for LED / PV

1	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	BBS0375CNR01		LED鍍膜設備 MOCVD
	原廠型號 original model		
	N/A		
2	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0020CNR00004		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL3600		
3	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0020W/NR00001		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL3560		
4	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	N/A		長晶爐 Crystallizer
	原廠型號 original model		
	HFL025NCC03		
5	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030CMR00010		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL4041		
6	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030CMR00011		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL4051		



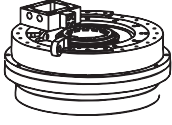
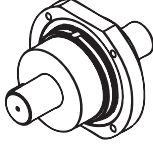
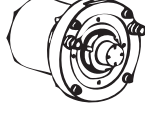

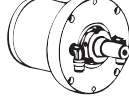
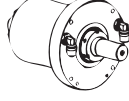
# 顯示器 / 觸控面板用軸封 Feedthrough for FPD / TP

1	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXC0145CER00001		真空機械手臂 Vacuum Robot
	原廠型號 original model		
	W-X00539		
2	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXT0260CNR00001		真空機械手臂 Vacuum Robot
	原廠型號 original model		
	42090C		
3	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030CMR00001		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	N/A		
4	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030CMR00002/7		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL2720		
5	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030CMR00004		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL1230		
6	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	AFS0020CNR01		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	N/A		





# 顯示器 / 觸控面板用軸封 Feedthrough for FPD / TP

7	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	N/A		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL1350		
8	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	N/A		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL2040		
9	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030W/MR00001		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL1260		
10	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030W/MR00002		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL2710(52-132565)		
11	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030W/MR00003		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	N/A		
12	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030W/MR00004		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL2711		

# 顯示器 / 觸控面板用軸封 Feedthrough for FPD / TP

13	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030W/MR00006		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL3851		
14	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030W/NR00001		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL1240		
15	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	XXS0030W/NR00011		連續鍍膜設備 In-line Sputter
	原廠型號 original model		
	AL2290		
16	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	N/A		真空機械手臂 Vacuum Robot
	原廠型號 original model		
	W-X00816		
17	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	N/A		真空機械手臂 Vacuum Robot
	原廠型號 original model		
	W-X00816		
18	ANTS型號 ANTS model	軸封外觀 feedthrough appearance	應用範圍 application field
	客制化 Customized	客制化 Customized	客制化 Customized
	原廠型號 original model		
	客制化 Customized		





## 動態測試的品質保證

Dynamic test of quality assurance

## 動態環境下執行真空測試

Vacuum testing under dynamic environment

## 動態環境下執行氦氣測漏

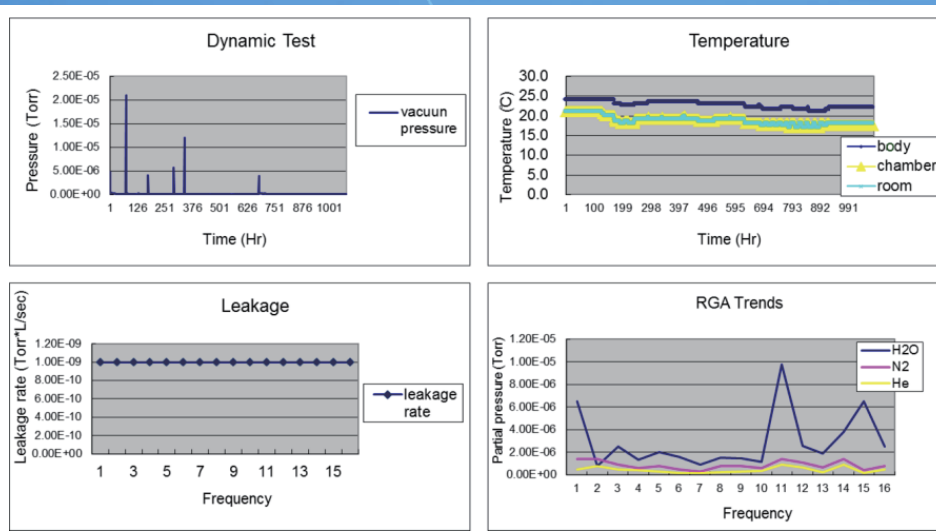
Dynamic Helium Leak check

## 全自動化測試

Fully automated testing



## Feedthrough dynamic process testing



# 應用奈米科技 磁流體真空軸封使用環境調查表

## 基本資料

公司行號	聯絡人姓名	聯絡電話	填表日期

請填寫下表讓我們了解您的磁流體軸封使用環境，作為製作及維修評估的參考

軸封基本資料	廠 牌	型 號	
使用機台	廠 牌	型 號	
軸封冷卻形式	<input type="checkbox"/> 氣冷式	<input type="checkbox"/> 水冷式 循環水壓 (kg)	
真空操作壓力	真空操作壓力(Torr)	大氣壓力(kg/cm2)	
使用氣體	<input type="checkbox"/> 無		
	<input type="checkbox"/> 非活性。請說明：		
	<input type="checkbox"/> 活性。請說明：		
產品安全	產品送交應用奈米科技時的狀態		
	<input type="checkbox"/> 無液體或氣體殘留	<input type="checkbox"/> 已去污	<input type="checkbox"/> 含簡易包裝
沉積物	<input type="checkbox"/> 無毒性 <input type="checkbox"/> 接觸毒性，請戴手套 <input type="checkbox"/> 揮發毒性，請戴面具		
溫度範圍	操作溫度 (°C)		
轉軸直徑	<input type="checkbox"/> 實心軸	<input type="checkbox"/> 中空軸	
主軸裝置方向	<input type="checkbox"/> 水平 <input type="checkbox"/> 垂直 <input type="checkbox"/> 斜向角度，請說明：		
主軸轉速	操作轉速(RPM)		
負載情況	徑向(大氣側) (kg)	徑向(真空側) (kg)	軸向(kg)

請在下面或背面繪圖標示外型尺寸與徑向負載位置

### 氣體參考說明

非活性	O <sub>2</sub> 、N <sub>2</sub> 、Ar、He、SF <sub>6</sub> 、CO <sub>2</sub> 、CF <sub>4</sub> 、C <sub>2</sub> F <sub>6</sub> 、C <sub>4</sub> F <sub>8</sub> 、CHF <sub>3</sub> 、CBrF <sub>3</sub> 、PF <sub>3</sub> 、PF <sub>5</sub> 、N <sub>2</sub> O、NH <sub>3</sub> 、NF <sub>3</sub> 、CH <sub>4</sub> 、Cl <sub>2</sub> 、CClF <sub>3</sub> 、C <sub>2</sub> ClF <sub>5</sub> 、WF <sub>6</sub> 、AsCl <sub>3</sub>
活性	BF <sub>3</sub> 、BCl <sub>3</sub> 、B <sub>2</sub> H <sub>6</sub> 、BBr <sub>3</sub> 、PH <sub>3</sub> 、PCl <sub>3</sub> 、POCl <sub>3</sub> 、SiH <sub>4</sub> 、SiCl <sub>4</sub> 、SiH <sub>2</sub> Cl <sub>2</sub> 、SiHCl <sub>3</sub> 、Si <sub>2</sub> H <sub>6</sub> 、SiF <sub>4</sub> 、H <sub>2</sub> 、HF、HCl、HBr、CO、AsH <sub>3</sub> 、ClF <sub>3</sub> 、SiCl <sub>4</sub> 、C <sub>3</sub> F <sub>6</sub> 、CH <sub>3</sub> F



# Applied Nano Technology Science, Inc.

## Feedthrough Application Condition Investigation Sheet



應用奈米科技股份有限公司  
APPLIED NANO TECHNOLOGY SCIENCE, INC.

### CUSTOMER INFORMATION

COMPANY	CONTACT	TELEPHONE	DATE

Please fill out all of the information for feedthrough overhaul reference.

FEED THROUGH INFORMATION	BRAND	TYPE	
EQUIPMENT INFORMATION	BRAND	TYPE	
COOLING METHOD	<input type="checkbox"/> AIR	<input type="checkbox"/> WATER CIRCULATED PRESSURE (kg)	
PRESSURE OPERATION	VACUUM PRESSURE(Torr)	ATMOSPHERE PRESSURE(kg/cm <sup>2</sup> )	
GAS	<input type="checkbox"/> N/A		
	<input type="checkbox"/> INACTIVE:		
	<input type="checkbox"/> ACTIVE:		
PRODUCT SECURITY	Part status when delivered to ANTS		
	<input type="checkbox"/> No Liquid or Gas residue	<input type="checkbox"/> DECONTAMINATED	<input type="checkbox"/> SIMPLE PACKAGE
PARTICULATE CONTAMINATION	<input type="checkbox"/> NONE <input type="checkbox"/> TOXIC(USE GLOVE) <input type="checkbox"/> VAPOUR TOXIC(USE MASK)		
TEMPERATURE	OPERATION (°C)		
SHAFT DIAMETER	<input type="checkbox"/> SOLID	<input type="checkbox"/> HOLLOW	
MOUNTING	<input type="checkbox"/> HORIZONTAL <input type="checkbox"/> VERTICAL <input type="checkbox"/> ANGLE :		
ROTARY SPEED	OPERATION(RPM)		
CYCLE TIME			
LOAD	ATMOSPHERE SIDE (kg)	VACUUM SIDE (kg)	AXIS (kg)

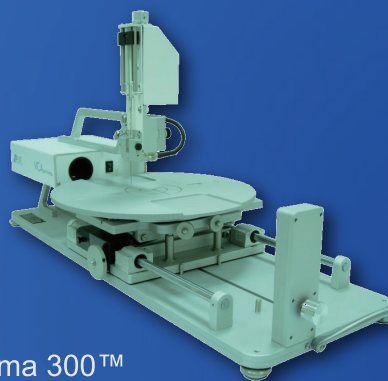
PLEASE ATTACH SKETCH FOR ADDITIONAL CLARIFICATION

### GAS REFERENCE

INACTIVE	O <sub>2</sub> 、N <sub>2</sub> 、Ar、He、SF <sub>6</sub> 、CO <sub>2</sub> 、CF <sub>4</sub> 、C <sub>2</sub> F <sub>6</sub> 、C <sub>4</sub> F <sub>8</sub> 、CHF <sub>3</sub> 、CBrF <sub>3</sub> 、PF <sub>3</sub> 、PF <sub>5</sub> 、N <sub>2</sub> O、NH <sub>3</sub> 、NF <sub>3</sub> 、CH <sub>4</sub> 、Cl <sub>2</sub> 、CCl <sub>3</sub> F、C <sub>2</sub> ClF <sub>5</sub> 、WF <sub>6</sub> 、AsCl <sub>3</sub>
ACTIVE	BF <sub>3</sub> 、BCl <sub>3</sub> 、B <sub>2</sub> H <sub>6</sub> 、BBr <sub>3</sub> 、PH <sub>3</sub> 、PCl <sub>3</sub> 、POCl <sub>3</sub> 、SiH <sub>4</sub> 、SiCl <sub>4</sub> 、SiH <sub>2</sub> Cl <sub>2</sub> 、SiHCl <sub>3</sub> 、Si <sub>2</sub> H <sub>6</sub> 、SiF <sub>4</sub> 、H <sub>2</sub> 、HF、HCl、HBr、CO、AsH <sub>3</sub> 、ClF <sub>3</sub> 、SiCl <sub>4</sub> 、C <sub>3</sub> F <sub>6</sub> 、CH <sub>3</sub> F

#### Applications:

- Coating assessment of the HMDS process
- Surface contamination detection
- Adhesive and primer preparation
- Coating uniformity
- Coating quality
- Surface cleanliness



VCA Performa 300™

#### Hardware Features

- High-resolution video camera with magnifying lens with high intensity LED lighting for precise image capture
- 300mm rotating stage, allows access to all areas of the wafer
- High-end PC is standard with high-performance video board for advanced image analysis and video capture
- Flat Screen Monitor

#### Software Features

- Automatic contact angle imaging and calculation
- Dynamic droplet capture (movie viewing of droplets)
- Surface energy (dynes/cm) analysis
- SPC (Statistical Process Control)
- Pendant Drop surface analysis



Dynamic Capture Window

#### Syringe Assembly

- Vertical Orientation
- Straight Needle
- Motorized Drive Mechanism
- 1.8 Degree Stepping Motor
- Syringe Head: Tilt back for safe and easy removal of large samples

#### Sample Platform

- Platform size and shape 12" Circular
- Sample size and shape 4", 6", 8", 12" circular Not wider than 12"
- Movement along the optical axis 6" by hand sliding with lock
- Movement transverse to the optical axis 6" by dial
- Vertical traveling distance 2" by dial
- Rotating 360 degrees by hand with Planary Bearing

#### VCA Optima

#### VCA 46 series (automatic mode)





應用奈米科技股份有限公司  
APPLIED NANO TECHNOLOGY SCIENCE, INC.

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How to contact ANTS?

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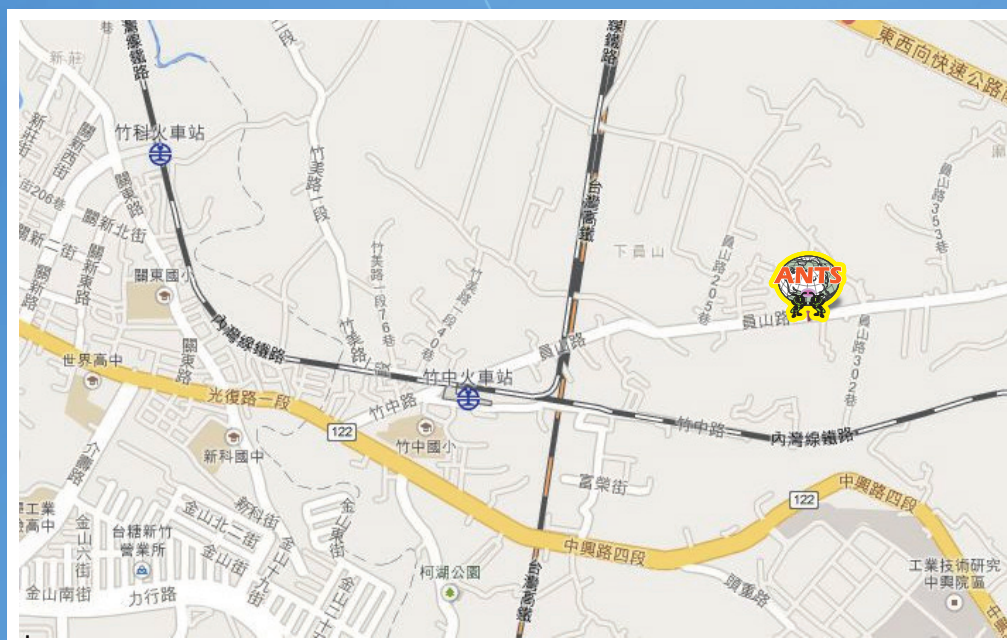
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