

Agilent Technologies: Your Vacuum Resource













Agilent Technologies and Varian are now one company. Two of Silicon Valley's champions have combined to create a one-stop, truly global vacuum supplier with a complete range of products and services for scientific research and industrial applications. Varian's 60+ years of technology leadership and tradition of innovation in vacuum and leak detection technology becomes a part of Agilent, the world's premier measurement company.

What this means for you:

- You reap the benefits of our shared values: customer satisfaction, commitment to quality, ethical standards, and technology leadership.
- You can continue to rely on the same people, products, and services to assist you in solving your vacuum challenges. Agilent's vacuum customers will experience the same high level of customer care and technical support, with best-in-class processes, resources, technologies, infrastructure, and better coverage assured for end users worldwide.
- Our dedicated R&D and Application Engineering Teams can offer you enhanced capabilities and partnership in the design, testing and application of custom solutions to specific OEM vacuum requirements.
- As the leader in high- and ultra-high vacuum solutions for physics research, mass spectrometry and electron microscopy, and with new solutions for the growing thin film deposition industry, Agilent is your vacuum resource.
- You can count on us as a stable, responsive, resourceful and financially solid strategic supplier.

To learn more about Agilent's Vacuum Products, please contact your local Agilent Office or Authorized Agilent Distributor, or visit www.agilent.com/chem/vacuum.

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Agilent Technologies and Varian are now one company: two of the science industry's best stories are writing a new story together

It's a story that will strengthen our commitment to deliver unmatched quality, innovation and services to our customers, while maximizing the power of our portfolio and global support network.

There is something specific in each company's attitude to research and technology: for Agilent this is represented here, in a constant and modular growth and in the search of efficiency. Each step is based on previous successful discoveries, building a solid structure that is designed to last.

- **Historical pioneer** of the vacuum market: many of our inventions, like the first ion pump created by Varian, now Agilent, in the late '40s, became a standard in this industry. We continue to study and develop new solutions, partnering with our Customers and with the major Research Centres worldwide.
- **Global presence:** we are the only vacuum supplier to have factories both in the US and in Europe, with a network of sales and service offices that spans the globe. Please visit our website at www.agilent.com/chem, or check the introduction pages of the catalogue to find the Agilent Technologies Vacuum Products' office nearest to you.
- **One stop supplier:** we have a broad range of vacuum products, including rough, high and ultra-high vacuum pumps, systems, instruments, valves, components, leak detectors and accessories.

- **Customer care:** technical support and customer service play an essential role in serving our customers, both OEMs and end users, with local language speaking service engineers, technical support toll-free lines 24/7, vacuum training courses and seminars offered in the US, Europe, and the Pacific Rim.



Introduction

- **Continuous investments** in infrastructure (new production capacity added to the European factory), technology (new TwisTorr turbomolecular pumping technology), organization and human resources.

- **Several convenient Service Programs** to help you maximize your productivity:

- **Advance Exchange:** in case of downtime we ship immediately (24 hours) to you a replacement unit from our closest distribution center.
- **Upgrade Program:** older models can be upgraded to an equivalent pump of most recent design and technology.
- **Factory Repair:** equipment is returned to our factory for failure analysis and corrective actions (whenever applicable).
- **Field Support Programs:** from preventive to corrective maintenance, to maximize equipment performance.

- **Communications:** Internet and e-commerce capability, with a new website based both on products and applications; exhaustive product documentation and technical notes on interactive CD and on paper; local language toll free lines in most countries.

- **Partnership:** we achieve our best results when collaborating with our customers to develop the solution that fits their vacuum requirements. Cooperating and working together means that we learn and grow together. This is our philosophy and the way we do business.

- **Ethics:** doing business globally, we must understand and respect the laws and the cultures of all the countries and people we work with, and continuous training programs assure that our employees achieve the highest ethical standards. We are proud to do business in a fair, correct and respectful way, and our customers recognize and appreciate this attitude.



Milestones



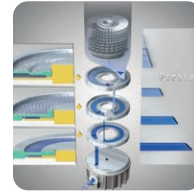
1930s

Varian brothers with physicist Bill Hansen, create a prototype of the klystron, a radio vacuum tube central to radar technology.



1967-1972

A new Vacuum factory opens in Torino, Italy. The Contra-Flow concept revolutionizes leak detection.



1992-94

The innovative MacroTorr concept allows much higher (x100) foreline pressures in Turbo pumps. ISO 9001 Certification is completed.



1948

On April 20 Sigurd and Russell Varian with Bill Hansen establish Varian Associates, Inc.



1983

The StarCell Ion Pump is developed, and the Ion Pump worldwide Center established in Torino.



1957-59

Varian Associates invents the first ion pump. The Vacuum Division becomes a separate business.



1986-90

Varian introduces the Turbomolecular Pumps in collaboration with the Elettrorava company.



1961-65

The ConFlat Flanges set the industry standard. Significant innovation in Diffusion pump technology markedly increases performance.



1992

The revolutionary new portable Helitest Leak Detector is introduced, with numerous applications in non-vacuum industries.



1998

The TriScroll Dry Pumps are the only two stage scroll pumps on the market.

Introduction



2001
Varian expands Torino facility with a third building.



2005-2006
ISO 14001 Certification achievement. New VS Series leak detectors, and PHD-4 Portable Helium Detector.



2010
The New Molecular-Drag Technology: TwisTorr Turbo Pumps offer unmatched vacuum performance in terms of pumping speed, compression ratio, compact size.



2007-2008
The IDP-3 is the first 60 l/m scroll pump in the market. A new Warehouse completed the renovation of Torino plant.



2010
Varian becomes a part of Agilent Technologies, the world's premier measurement company.



2008
New TriScroll with Inverter technology. New XGS-600 Gauge Controller.



2002-2004
New Turbo-V Navigator series, with electronics on-board, followed by the Turbo-V K-G series with integrated electronics embedded in the pump body. First "smart" Rotary Vane Pumps employ an innovative frequency inverter.



2009-2010
Innovative line of TPS Turbo Pumping Systems. New High Capacity MS Rotary Vane Pumps and RPS Roots Pumping Systems, for demanding industrial vacuum applications.

Agilent Vacuum Products

Agilent Technologies offers more than 7,000 Vacuum Products, including vacuum pumps and leak detection products, components and accessories. The availability of a complete range of products represents an important strength, allowing

us to offer complete solutions and be a one-stop supplier for the study, design, manufacture and servicing of all system components. Our customers are looking for "complete" solutions to their requirements: a "Product & Service System"

Create

In order to create "vacuum" in a system chamber, vacuum pumps or integrated pumping systems such as these are used. The gas mix is progressively pumped away, resulting in a very clean volume where pressure is extremely low.



that includes top quality pumps, detectors, components and accessories, and a service program that assures high performance, reliability over time, good pre- and post-sale customer service and technical support available worldwide.

In short, they ask us for a comprehensive analysis of their specific needs and for a shared development of appropriate proposals, able to **Create, Control, Maintain** and **Measure** a vacuum.

Control

Keeping or changing certain pressure conditions in a controlled way is essential to operating industrial processes or scientific research in vacuum. Valves, flanges, tubes and other components are specifically designed to contain and carry air and regulate its flow.



Maintain

In addition to the variety of measuring components seen so far, of the greatest importance are Leak Detectors: instruments designed to locate infinitesimal leaks that could damage operational functionality. They are particularly helpful for vacuum maintenance and diagnostics at the first installation or during periodic inspections.



Measure

Precise pressure monitoring is of extreme importance in all vacuum processes. Built for this purpose, gauges, transducers, and controllers manage and measure pressures in a variety of ranges.



Vacuum Applications

Agilent Technologies thrives on supporting its customers in a variety of applications in many technological scenarios. Such applications include:

R & D

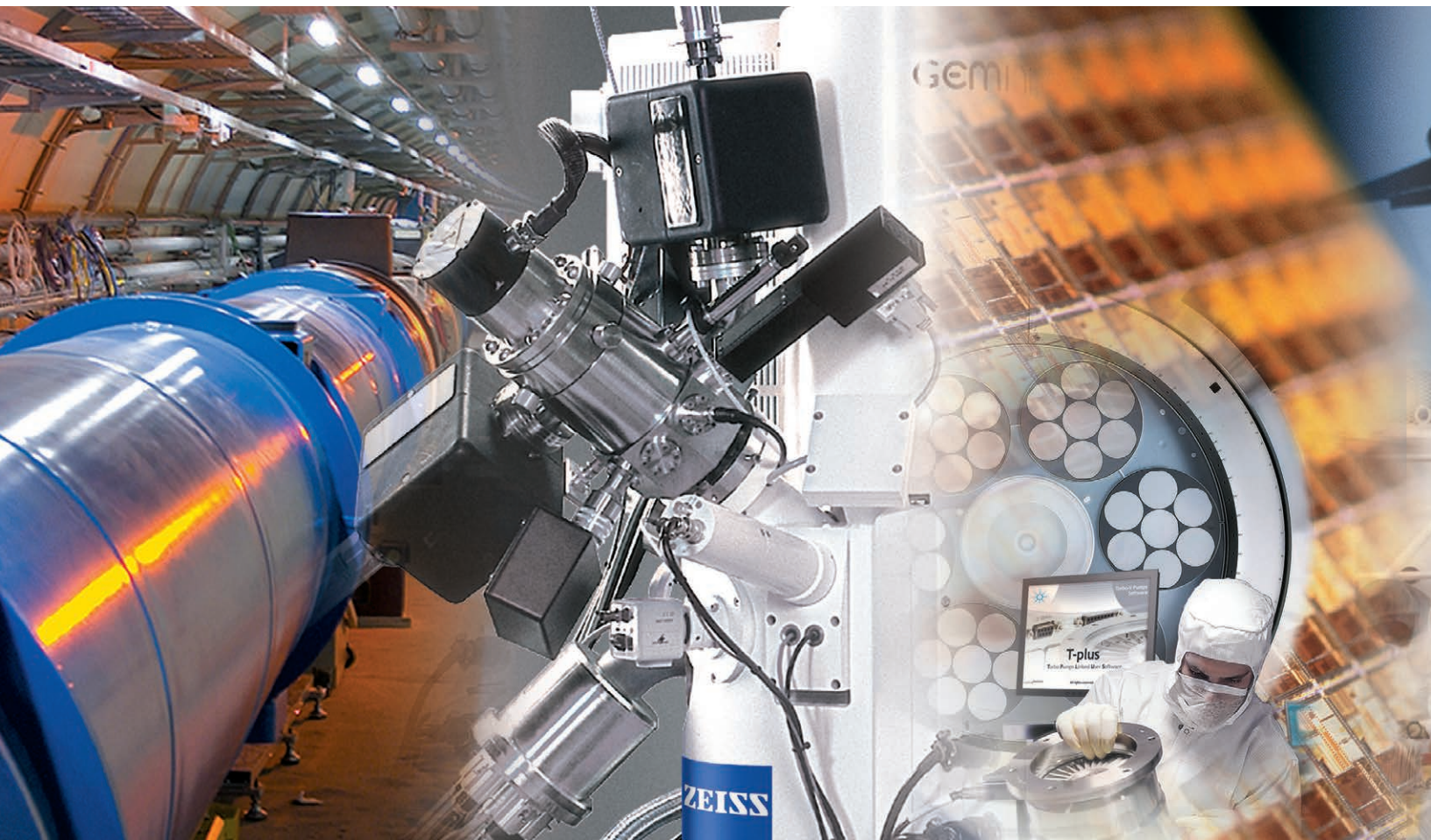
- Particle Accelerators
- H.E.P.
- Universities
- Government Labs
- Scientific Research Laboratories
- Space Simulation

Instrumentation Manufacturers

- Mass Spectrometers
- Electron Microscopes
- Leak Detectors
- Surface Analysis
- Gas Analysis
- Metrology/Inspection/Defect Review Systems for Semiconductor
- Focused Ion Beam
- Electron Beam Systems

Semiconductor Process Vacuum

- Silicon Semiconductor
- Compound Semiconductor
- TFT-LCD Displays
- MEMS
- Process Equipment Manufacturers and End Users for PVD, CVD, Etching, Ion Implantation, MBE, Crystal Pulling, etc.



Leak Detection

- Automotive Systems and Components
- Semiconductor Process Tools
- Refrigeration and Air Conditioning
- Industrial Components
- Aerospace Systems and Components
- Power Generation
- Food Packaging

Thin-Film Deposition

- Glass/Web/Optical Coating
- Data Storage (CD, DVD, ...)
- Thin Film Heads
- Surface Coating (wear protection, decorative, ...)
- Display Coatings (OLED, FED, PDP, ...)

Industrial Vacuum

- Vacuum Metallurgy
- Vacuum Heat Treatment
- Laser Technology
- Electron Tubes
- TV Tubes
- Lamps and Bulbs



Agilent Worldwide Sales and Service Network

A truly global network with Customer Support and Service Hubs located in six countries with multilingual Center personnel who can support all customer needs locally.

We are fully committed to make your experience with Agilent pleasant and efficient: we encourage you to contact us for any need or suggestion that you might have.

Americas

● **Agilent Technologies**
121 Hartwell Avenue,
Lexington MA 02421, USA
Tel: +1 781 861 7200
Fax: +1 781 860 5437
Toll free: +1 800 882 7426
vpl-customerservice@agilent.com

■ **Mexico**
Agilent Technologies
Concepcion Beistegui No 109
Col Del Valle, C.P. 03100, Mexico, D.F.
Tel: +52 5 523 9465
Fax: +52 5 523 9472

■ **Brazil**
Agilent Technologies Brasil
Avenida Marcos Penteado de Ulhoa
Rodrigues, 939 – 6° andar
Castelo Branco Office Park,
Torre Jacarandá - Tamboré
Barueri, Sao Paulo CEP: 06460-040
Toll free : 0800-728-1405

▲ **Argentina**
VEQ S.A.
Vacuum Equipment
Av. Belgrano 1720 - 2° Piso
C1093AAS - C. A. B. A.
Buenos Aires
Argentina
Tel/Fax: +54 11 4382 5558

▲ **Brazil**
Radchrom Analitica Ltda.
Rua Divino Salvador, 276
Paulinia - SP 13140-000, Brazil
Tel: +55 19 3833 1300
Fax: +55 19 3833 1200

Europe, Middle East and South Asia

● **Agilent Technologies Italia SpA**
via F.lli Varian 54
10040 Leini, (Torino), Italy
Tel: +39 011 9979 111
Fax: +39 011 9979 350
Toll free: 00 800 234 234 00
vpt-customerservice@agilent.com

■ **Benelux**
Agilent Technologies Netherlands B.V.
Herculesweg 8, 4338 PL Middelburg
The Netherlands
Tel: +31 118 671570
Fax: +31 118 671569

■ **France**
Agilent Technologies France
7 avenue des Tropiques
Z.A. de Courtaboef - B.P. 12
91941 Les Ulis cedex, France
Tel: +33 (0) 1 69 86 38 84
Fax: +33 (0) 1 69 86 29 88

■ **Germany and Austria**
Agilent Technologies
Alsfelder Strasse 6, Postfach 11 14 35
64289 Darmstadt, Germany
Tel: +49 (0) 6151 703 353
Fax: +49 (0) 6151 703 302

■ **UK and Ireland**
Agilent Technologies UK Ltd.
6 Mead Road, Oxford Industrial Park
Yarnton, Oxford OX5 1QU, UK
Tel: +44 (0) 1865 291570
Fax: +44 (0) 1865 291571

▲ **Finland and Estonia**
Mecastep Oy
Ullankankaantie 1
15550 Nastola, Finland
Mobile: +35 8 405044057
Fax: +35 8 50 7800 4562

▲ **Greece**
Sotiria Argyropoulos Representations
International Technology Corporation
22 Philellinon Street
GR-546 45 Thessaloniki, Greece
Tel: +30 2310 856585 / 2310 447009
Fax: +30 2310 435868

▲ **Hungary**
B&T Service Kft
Repülőtéri út. 2
1112 Budapest, Hungary
Tel: +36 1 231 0993
Fax: +36 1 231 0994

▲ **Norway**
Holger Teknologi AS
Liakollveien 1A
NO-1259 Oslo, Norway
Tel: +47 23 16 94 77
Fax: +47 22 61 10 30

▲ **Poland**
Uni-Export Instruments Polska
ul. Czerniakowska 155/109
00-453 Warszawa, Poland
Tel: +48 (0) 22 626 87 86
Fax: +48 (0) 22 626 87 85

▲ **Romania**
HISTERESIS SRL
Str. G. Enescu, Bl. 251,
Sc. B, Ap. 13
730208 Vaslui, Romania
Tel: +40 335 407 797
Fax: +40 318 171 731

▲ **Slovakia**
Expert Vacuum Sro
SK - 945 01 Komárno
Eötvösöva ul. 3195/21
Slovakia
Tel: +42 19 10 109650

▲ **Spain**
Telstar Instrument, S.L.U.
Parc Científic i Tecnològic Orbital 40
Avgda. Font i Sagué, 55
08227 Terrassa, Spain
Tel: +34 935 442320
Fax: +34 935 442911

▲ Telstar Instrument
Santibáñez de Béjar 2
28042 Madrid, Spain
Tel: +34 91 3717517

▲ **Sweden**
ROWACO AB
Westmansgatan 49
S-582 16 Linköping, Sweden
Tel: +46 (0)13 138 010
Fax: +46 (0)13 311 335

▲ **Switzerland**
Swiss Vacuum Technologies SA
Chemin de Buchaux 38
CH-2022 Bevaix-Neuchâtel
Switzerland
Tel: +41 32 725 2020
Fax: +41 32 725 2030

Web Site and e-Commerce:

Introduction

- Manufacturing Locations
- ▲ Agents
- Subsidiaries
- Service Hubs



Pacific Rim

www.agilent.com/chem

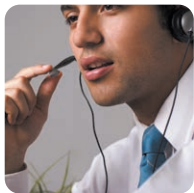
- ▲ **Israel**
Israel Scientific Industries
32, Shaham st., Amargad Bldg.
Kiryat Matalon
49170 Petah-Tikva, Israel
Tel: +97 23 9232202
Fax: +97 23 9229750
- ▲ **Russia**
CCS Services SA
Marshal Timoshenko str. 19
121359 Moscow, Russia
Tel: +7 095 926 59 43
Fax: +7 095 564 80 52
- ▲ **Turkey**
INTERELEKTRO Ltd.
Cyberpark, 5.Cd. 4/202
Bilkent 06800 Ankara, Turkey
Tel: +90 312 285 2500
Gsm: +90 544 285 2500
Fax: +90 312 266 4245
- ▲ **Ukraine**
Novations LLC
Office 813, Build. 23.
Mariny Raskovoy Str., 02002 Kiev, Ukraine
Tel: +38 (044) 223-93-00
Fax: +38 (044) 223-93-11

- **India**
Agilent Technologies India Pvt. Ltd.
G01. Prime corporate Park, 230/231,
Sahar Rd., Opp. Blue Dart Centre,
Andheri (East), Mumbai, 400 099 India
Tel: +91 22 30648287/8200
Fax: +91 22 30648250
Toll free: 1800 113037
- ▲ **Pakistan, Saudi Arabia, U.A.E.**
Imtiaz Chemineers
13-J, Markaz: F-7
44000 Islamabad, Pakistan
Tel: +92 51 2650174
Fax: +92 51 2650943

- **China**
Agilent Technologies (China) Co. Ltd
No.3, Wang Jing Bei Lu,
Chao Yang District,
Beijing, 100102, China
Tel: +86 (10) 6439 7888
Fax: +86 (10) 6439 1318
Toll free: 800 820 8266
vpc-customerservice@agilent.com
- Agilent Technologies
4th floor, East Wing of Building 16 No.140
Tianlin Road, Xuhui District
Shanghai, China
Toll free: 800 820 8266
- Agilent Technologies
Room 2508-11 West Tower
YangCheng Commercial Building
TiYuDong Road
Guangzhou, 510620, China
Tel: +86 (20) 3887 1469
Fax: +86 (20) 38871 470
Toll free: 800 820 8266
- **Japan**
Agilent Technologies Japan, Ltd.
8th Floor Sumitomo Shibaura Building
4-16-36 Shibaura Minato-ku
Tokyo 108-0023, Japan
Tel: +81 3 5232 1253
Fax: +81 3 5232 1710
Toll free: 0120 655 040
vpi-customerservice@agilent.com
- **Korea**
Agilent Technologies Korea Ltd.
Shinsa 2nd Bldg. 2F
966-5 Daechi-dong
Kangnam-gu, Seoul, Korea 135-280
Tel: +82 2 3452 2455
Fax: +82 2 3452 2451
Toll free: 080 222 2452
vpk-customerservice@agilent.com
- **Singapore**
Agilent Technologies Singapore Pte Ltd.
No.1 Yishun Avenue 7
Singapore 768923
Tel: +65 6215 8045
Fax: +65 6754 0574
Toll free: 1 800 2762622
vps-customerservice@agilent.com
- **Southeast Asia**
Agilent Technologies Sales Sdn Bhd
Unit 201, Level 2 uptown 2,
2 Jalan SS21/37, Damansara Uptown
47400 Petaling Jaya,
Selangor, Malaysia
Tel: +60 3 7712 6106
Fax: +60 3 6733 8121
Toll free: 1 800 880 805
vps-customerservice@agilent.com
- **Taiwan**
Agilent Technologies Taiwan Limited
20 Kao-Shuang Rd., Pin-Chen City, 324
Taoyuan Hsien, Taiwan, R.O.C.
Tel: +88 6 34959281
Toll free: 0800 051 342
vpw-customerservice@agilent.com
- ▲ **Australia**
Dynapumps (East Coast)
Unit 9, 1-3 East Spur Court
Kilsyth, Victoria 3137
Tel: +61 38 7616511
Fax: +61 38 7616533
- ▲ Dynapumps (West Coast)
88 Belgravia Street
Belmont Western Australia 6104
Tel: +61 89 4242000
Fax: +61 89 4242001
- ▲ **Malaysia**
Semiconductor Services (Malaysia)
Sdn. Bhd. No. 10 & 11, Block B, Lot 756
Prime Subang Light Industrial Park
Jalan Subang 3, Off Persiaran Subang
47610 Subang Jaya
Selangor Darul Ehsan, Malaysia
Tel: +60 35 6349239/43
Fax: +60 35 6347313
- ▲ Renorex Sdn. Bhd.
No. 72 & 74, Jalan IKS Bukit Tengah
Taman IKS Bukit Tengah
14000 Bukit Mertajam
Penang, Malaysia
Tel: +60 45 085755
Fax: +60 45 075755
- ▲ **Singapore**
Singapore Technologies Electronics Ltd.
Marketing Division
24 Ang Mo Kio Street 65
Singapore 569061
Tel: +65 6413 1573
Fax: +65 6484 5357
- ▲ **Thailand**
Next Generation Products Co., Ltd.
89/61 Klang Mueng Village (Phase 2)
Soi Ladphrao 71
Ladphrao Bangkok TH
Mobile: +66 86 329 0091
Tel: +66 2538 5362-3
Fax: +66 2538 1996

Agilent Customer Support Programs

As a world-class company, we are committed to excellence in customer support as a means to enhance the value of our products for our customers and to lower total cost of ownership. Our support strategy is based on the following fundamentals:



Telephone Hotlines

Our toll free hotlines provide you with the easiest live front-end support. Our native language customer service and technical support representatives will assist you with order information, backlog management, return

authorization, pricing and delivery, and with product technical data, literature fulfillment and troubleshooting.



Vacuum Training Programs

Agilent's highly regarded training program is staffed by dedicated professionals with expertise and experience in a broad range of vacuum and leak detection technologies. Courses are offered at Agilent

manufacturing facilities in North America and Europe, at convenient regional locations and at customer locations worldwide.



Qualified Staff

We back our global commitment with continuous attention to professional development and personal motivation for our staff. You expect proficiency in customer care, and we deliver it.



Worldwide Parts Sourcing Plan Three Progressive Levels of Support

Agilent offers three convenient Service Programs to help you maximize your productivity:



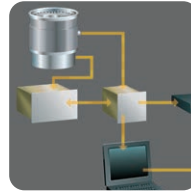
ADVANCE EXCHANGE

To maximize uptime, and for those occasions where you cannot afford stopping your process, Agilent offers exchange units for advanced shipment, with pumps which are rebuilt to as-new specs and latest revision level. As soon as requested, your order can be processed within 24 hours.



Logistics Infrastructure

Agilent has a network of manufacturing plants in North America and Europe plus four service hubs in the Pacific Rim. An advanced ERP system allows all these locations to operate and interact in real time.



World-Class Quality

Conformance to procedures designed for global customer support allows us to satisfy the most demanding requirements. This is complemented by our continuous improvement and escalation processes.

When time is of the essence, our real time data network helps us to work closely with you, to share online data and to videoconference on a 24 hour basis.



Applications Support

Agilent staff is organized by applications and markets. This allows us to focus on total solutions rather than on a single product line.

To meet the most demanding technical needs, our applications engineering team brings our knowledge into your factory. In this way you get the most from your investment in our current products and can expect maximum benefit from new technologies as we develop them.



e-commerce / e-diagnostics

Agilent leverages the Worldwide Web to provide you immediate access to comprehensive support, right from your desktop. Our e-commerce site not only lets you access critical product data, but also helpful applications information and order status. e-diagnostics can substantially reduce downtime as products age. Powered by our exclusive MoniTorr technology, the Agilent Technical Support Center has access to the real-time operating conditions of a turbopump in the field and uses our expertise to maximize your system uptime.



REPAIR

Agilent products offer unmatched reliability, performance and cleanliness. Production requirements, however, inevitably create, over time, the need for maintenance and repair. Timely repair at Agilent will keep your products performing at an outstanding level all the time.

UPGRADE

Designed for customers who want replace an Agilent unit with a newest technology product. We rebuild these products to as-new specifications, with a full 12-month warranty.