NEW
AR-G2
INTRODUCING THE WORLD’S FIRST MAGNETIC BEARING RHEOMETER!
More worldwide customers choose TA Instruments than any competitor as their preferred rheology or thermal analysis supplier. We earn this distinction by best meeting customer needs and expectations for high technology products, quality manufacturing, timely deliveries, excellent training, and superior after-sales support. We pride ourselves in the technical competence and professionalism of our sales force, whose only business is rheology and thermal analysis. TA Instruments is recognized worldwide for its prompt, courteous, and knowledgeable service staff. Their specialized knowledge and experience are major reasons why current customers increasingly endorse our company and products to their worldwide colleagues.
THE FUTURE OF RHEOLOGY

4 SHOW ME THE MAGNETIC BEARING RHEOMETER

6 NEW AR-G2 SYSTEMS

8 BEST SELLING RHEOMETER

10 UNIQUE ARES RHEOMETERS

12 ACCESSORIZE MY SYSTEM

14 TRAINING
NEW FEATURES

- **New Magnetic Bearing Technology**
- **Patented New Motor Technology**
- **Ultra-low Nano-torque in both stress & strain control**
- **New Smart Swab™ Geometries (Patent Pending)**
- **New Fast Heating Oven (ETC)**
- **New ETC Camera Viewer**
- **Real-time Streaming Video and Image Capture**

Unprecedented Low Torque Measurements

Boasting a Decade of Low End Improvement over All Other Rheometers

![Graph showing low torque measurements](image)

**Legend:**
- Blue dots: Controlled Stress Mode, CS
- Orange dots: Controlled Strain Mode, CR
- Green line: Newtonian Model Fit, Newtonian Viscosity = 5.537

ETC Camera Viewer
AR-G2

WORLD'S FIRST RHEOMETER WITH A MAGNETIC THRUST BEARING FOR ULTRA-LOW TORQUE PERFORMANCE
AR-G2 Peltier Plate System
Includes:
AR-G2 Magnetic Bearing Rheometer
Smart Swap™ Peltier Plate
Two Smart Swap Geometries
Rheology Advantage Software

$82,900

AR-G2 Polymer System
Includes:
AR-G2 Magnetic Bearing Rheometer
New ETC with Oven Viewer Camera
One Smart Swap™ ETC Kit
Rheology Advantage Software

$96,900
**UNIQUE FEATURES**

- Direct strain control over entire torque range
- Real-time waveform display
- Ultra-low inertia for superior stress and strain control
- Smart Swap™ system
- Ultra-stiff triple bearing head design
- Single piece aluminum casting
- Temperature isolated normal force transducer

**AR 2000 Advanced Fluids System**

Includes:
- AR-2000 Air-Bearing Rheometer
- Smart Swap™ Peltier Plate
- Two Peltier Plate Geometries
- Peltier Concentric Cylinder System
- Rheology Advantage Software

$64,900
**ADVANCED POLYMER SYSTEM**

(shown at left)

Includes: ARES with Forced Convection Oven, Hi-Resolution motor, patented 2KFRT transducer, Melt Starter Kit (Parallel Plate, Cone and Plate, and Torsion) and new patent-pending Extensional Viscosity Fixture

$99,900

![Parallel Plate](image1.png)

![Extensional Viscosity Fixture](image2.png)

![Torsion Rectangular](image3.png)

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**ARES-RFS Peltier Fluids System**

Includes: ARES-RFS Rheometer with Peltier Plate, Waveform & Fast Data Sampling Option, Peltier Shear Testing kit and Air Dryer

$89,900

![ARES-RFS](image4.png)
**AR 2000 Upper Heated Plate**

Unique new AR 2000 Smart Swap option for use with Peltier Plate provides upper plate temperature control to 150°C and enclosed purge gas environment. Features automated zero heat flow calibration and multiple cooling options.

*Price: $7,000*

![Image of AR 2000 Upper Heated Plate]

**AR 2000 Pressure Cell**

Ideal for materials that volatilize under atmospheric pressure. This sealed vessel, used with standard Peltier Concentric Cylinder Jacket, can be pressurized to 140 bar (2,000 PSI) and temperatures up to 150°C.

*Price: $18,000*

![Image of AR 2000 Pressure Cell]

**Graphs**

- **UHP – After Zero-Heat-Flow Calibration**
  - Top and Bottom temperature graphs over time.

- **Syrup Heated and Cooled in Pressure Cell**
  - Graph showing temperature and viscosity over time.
**ARES WAVEFORM AND FAST DATA SAMPLING**

Allows for real-time display of the waveforms during oscillation experiments. Includes an oscilloscope software utility, and fast data sampling for data rates up to 100 data points per second. **Note:** Requires ARES version 5 or higher, and a computer with Windows 2000 or Windows XP operating System and USB port. **$4,995**

**ARES EXTENSIONAL VISCOSITY FIXTURE**

New patent-pending fixture for use with an ARES equipped with Force Convection Oven. The Extensional fixture permits measurements of extensional viscosity of polymers. **$14,500**

**ARES UV CURING**

UV Curing Option is an accessory for ARES and permits characterization of photocuring materials. Available with or without light source and can be used with both Peltier Plate and Bath Temperature control options. **Note:** Option requires Waveform and Fast Sampling Option. **Price includes UV light source.** **$35,000**
Training Advantage

Training is a critical component of the support we provide customers. In addition to the on-site training that is part of your instrument purchase, we offer a variety of training courses in our state-of-the-art training facilities or on-line through the Internet. Described below are the courses offered in 2005, and the schedule through June.

Theory & Applications Training Courses

These one-day courses are designed to familiarize the user with applications, method development, and operating techniques of our thermal analysis and rheology instrumentation. Each course is lecture-based, and is specific to a particular technique. The courses are usually held in our New Castle, DE Training Center. They are scheduled at regular intervals, sometimes in conjunction with the Hands-On Courses described below.

Hands-On Training Courses

Combining lecture and hands-on training, these two-day courses feature limited class size that ensures an ideal learning environment. Topics include theory, instrument and software operation, calibration, and applications. They are held in our New Castle, DE or Chicago, IL facilities, and sometimes scheduled in conjunction with the Theory & Applications Training Courses described above.

Custom Onsite Training Courses

For the ultimate training experience, we offer custom courses in our laboratories, or at your facility. The courses can be customized to include lecture, hands-on training, or a combination of both.

E-Training Courses

We offer a variety of live and pre-recorded courses via the Internet. You log in on your computer and view the presentations. Live courses offer a teleconference (U.S. phone number), so that you can interact with the speaker. Pre-recorded courses provide an ideal format for learning at your convenience.

For more information, visit: www.tainstruments.com/support/training.html.
## JANUARY

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- DSC Theory & Applications
- MDSC Theory & Applications
- TGA Theory & Applications
- DSC / TGA Hands-On Training Course – DE

| 17 | 18 | 19 | 20 | 21 |
| 24 | 25 | 26 | 27 | 28 |

## FEBRUARY

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- TGA Theory & Applications
- DSC Theory & Applications
- MDSC Theory & Applications
- DMA Theory & Applications
- Rheology Theory & Applications
- ARES Hands-On Training Course – DE

| 14 | 15 | 16 | 17 | 18 |
| 21 | 22 | 23 | 24 | 25 |

* There are no courses scheduled for May

## MARCH

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- DSC / TGA Hands-On Training Course – Chicago
- Q800 DMA Hands-On Training Course – Chicago

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## APRIL

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- DMA Theory & Applications
- Q800 DMA Hands-On Training Course – DE

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## JUNE

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- Rheology Theory & Applications
- ARES Hands-On Training Course – DE
- ARES Hands-On Training Course – Chicago

| 20 | 21 | 22 | 23 | 24 |
| 27 | 28 | 29 | 30 |    |
Who are TA's Customers?

98% of the world's largest Polymer Manufacturers use TA Instruments systems.

92% of the top 50 Pharmaceutical Manufacturers rely on TA Instruments Technology to characterize a wide range of pharmaceutical materials.

86% of U.S. Chemical Companies use TA Instruments Thermal Analysis systems.

75% of the world's largest Coatings Companies use TA Instruments Thermal Analysis and Rheology systems.

95% of the world's largest Adhesives Manufacturers use TA Instruments Rheology systems.