rotronic

Humidity news

issue 1/2001

Big HygroPalm Competition!

Win a HygroPalm with 4 mm probe!

Mini–Probe
One more step in Miniaturization

ROTRONIC
Transmitters for the Museumquarter in Vienna

HygroClip in Colognes Cathedral

Special Feature
ROBO LOG
Tracking down bacteria

PREFACE

Welcome to the 3rd issue of our Humidity News! In our last issue, we introduced our new digital range of products, the HygroPalm, HygroLab and HygroFlex. The ROTRONIC Sales and Marketing team have been travelling the world introducing the new products at exhibitions and conferences, and we are pleased to say that the response from both old and new customers has been really positive, and demand is already way ahead of our expectations! In this and future issues of Humidity News, we plan to focus on some of the excellent innovations our R&D and Marketing team has integrated into the new products. We start with the HygroPalm on page 4, where some of the most interesting features are described.

We also continue to present many of the diverse applications where ROTRONIC products are used. The ROTRONIC Sales team has always been focused on providing solutions to our customers, rather than just selling products. If you would like your own application to be featured in Humidity News, please let us know or contact your local distributor. We are particularly interested in applications where energy efficiency or product quality benefits are gained.

Humidity News cannot go by without at least one new product announcement! On page 7 we introduce yet another unique instrument; our new HygroClip based 4mm diameter cable probe, developed for applications in the building materials, electronic testing and conservation markets.

Thank you for your continued interest in our company and products.

Susanne Schroff
Vice President

LOOK OUT, THERE'S A NEW CATALOGUE ABOUT

ROTRONIC have recently launched a new 'Focus' catalogue containing the latest and best selling instrument range.

An 'e-shop' where you can buy this product selection on-line will be available from October 2001.

WINNER OF THE 90 CM ROLINA (HUMIDITY NEWS 1)

The winner of the first Humidity Contest is Walter Schulz, Knoll AG Ludwigshafen, Germany

Further winners are:

- Siegfried Schmid, Vaisala GmbH, Stuttgart, G
- Andrew C. Hurley, Clive Hurley Environmental Eng, Blackburn, UK
- Liam Gallagher, Dairygold Foods, Mitchelstown, IR
- Dave Gordon, Agilent Technologies Ltd, Workingham, UK
- Herr Sokollek, Seitenbacher GmbH & Co, Buchen, G
- Herr Sägesser, Ceeresola Tunnelbautentechnik AG, Magden, CH

Congratulations to all the winners!

HOW OLD IS YOUR ROTRONIC HANDHELD?

On page 4 and 5 we focus on our brand new portable humidity instrument, the HygroPalm.

To mark this occasion, we are running a competition to find the oldest surviving GT series instrument.

If you are still using one of our original products, please fax to +41 1 837 00 73 your name, address, telephone number and the instrument's serial number and history.

The user of the oldest instrument will win a brand new HygroPalm handheld unit including docking station and software! See the back page of this Humidity News for the competition entry form.

Overview

METEOREX BEIJING

Exhibition Schedule,
Meet ROTRONIC at:

MessComp
04. – 06.09.2001
Wiesbaden, Germany

Ineltec
04. – 07.09.2001
Basel, Switzerland

ISA
10. – 13.09.2001
Houston, Texas, USA

Interkama
24. – 28.09.2001
Düsseldorf, Germany

ROTRONIC recently attended the International weather monitoring conference and exhibition, METEOREX, held in Beijing. Many of the worlds leading Meteorological experts were present, sharing ideas and knowledge, as well as viewing the latest products for the measurement of atmospheric data such humidity, temperature, pressure, wind speed, radiation, pollution and precipitation.

Our marketing team were able to discuss many aspects and problems associated specifically with the measurement of humidity and temperature. All the feedback we received from around the world will be considered during the development of our meteorological product range.

The next METEOREX will be held in Bratislava and we look forward to participating again.

FOCUS ON HYGROPALM

HygroPalm – The Ultimate Portable Humidity Instrument?

Evolution:

HygroPalm is our new portable humidity instrument. It is the latest in a generation of products which has led the market for over 20 years thanks to high accuracy, excellent long term stability and a wide range of probe options. Many of our readers will recognize our first handheld – the GT series, launched in 1980, and still in widespread use today.

HygroPalm is based exclusively on digital technology. Measurements are performed with a range of HygroClip probes with different configurations to suit a wide variety of applications. Thanks to the digital technology, the probes can be interchanged by the user with no loss of accuracy.

Instrumentation based on digital technology offers many features and benefits. Digital sensor characterisation and linearisation means improved precision; digital communication of measured values means no signal loss; and calibration using software instead of potentiometers means less adjustment errors.

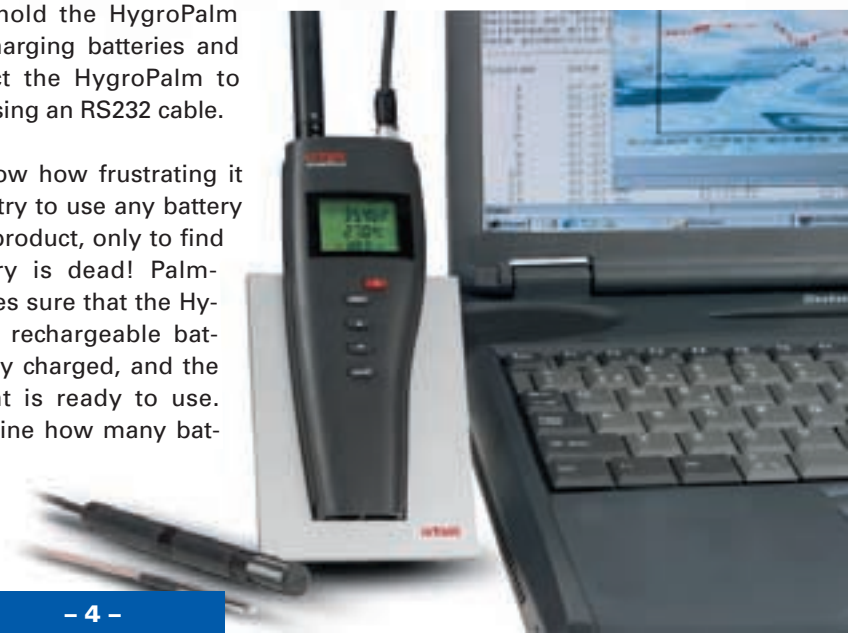
Some of the more unique features of the HygroPalm are worthy of further description, so we have selected three which we feel will provide a real practical benefit to our customers.

Docking Station:

PalmDock is a docking station exclusively designed for use with the HygroPalm. It has two main practical functions; to hold the HygroPalm while recharging batteries and to connect the HygroPalm to your PC using an RS232 cable.

We all know how frustrating it can be to try to use any battery powered product, only to find the battery is dead! PalmDock makes sure that the HygroPalm's rechargeable battery is fully charged, and the instrument is ready to use. Also imagine how many batteries are used throughout the world to power portable instruments; using rechargeable batteries is not only more cost effective, but also helps to save the environment.

When fitted into the PalmDock, the HygroPalm is also connected directly to your PC. With the user friendly HW3 software, the user can pre-configure the instrument for use with simple menu selections. User options include different measurement units, calculated parameters (dewpoint, wet-bulb etc), and calibration functions.



Calibration:

Digital measurement probes = digital calibration = no screwdrivers! HygroPalm includes several calibration features to suit all types of users:

One point HygroClip adjustment:
If the HygroClip measurement probe is exposed to a stable reference humidity environment, it is possible to single point adjust (offset) using the keypad of the HygroPalm.

Multipoint HygroClip adjustment:
The sequential adjustment of humidity probes at 2 or 4 points is periodically required to maintain maximum precision. With the HygroPalm keypad this process can be controlled and any adjustment be made.

Transmitter Maintenance and Calibration:

HygroPalm can be used to display measured values and make calibration adjustments to compatible humidity transmitters (HygroFlex). Engineers can check output signals and, if necessary, adjust at single or multiple points without the need to open the transmitter housing (external connection).

The calibration facilities available on the HygroPalm depend on the version. Please request a datasheet. Further information is available at www.rotronic-humidity.com.

Third Party Probe Input and Pressure Compensation:

HygroPalm has the option of a third measurement input channel which can be programmed to accept any measurement input such as temperature, pressure, air velocity, light level or ph, provided the probe has an output signal within 0...2.5 VDC.

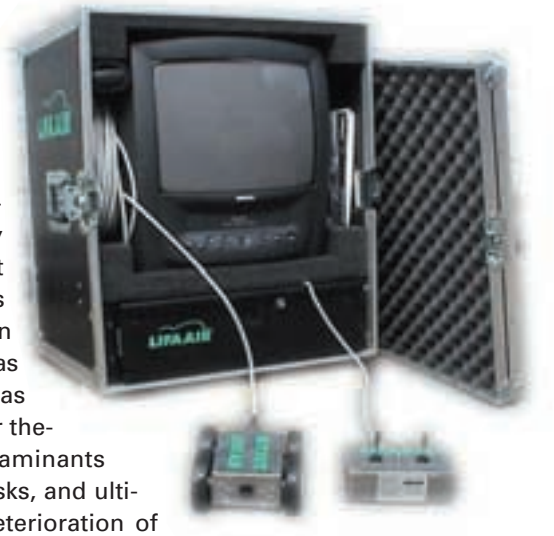
One practical use of this feature is the ability to accept a pressure-signal, which can be used to compensate pressure-dependent calculated values such as wet-bulb temperature. Mixing ratio or enthalpy.

Other customers have found the input useful for the measurement of air velocity, which is often required along with humidity and temperature when air conditioning systems are installed.

ROBO LOG

Vittorio Vitale
Owner
Fattore Vitale & Co.

For safe and efficient climate control, maintenance of air-distribution ducting is essential. Dirty ducts not only reduce efficiency, but can also be a potential health hazard. Finnish company Oy Lifa Air Ltd has found an excellent way to investigate the condition of ducts using remote controlled video equipment, ROTRONIC Hygro-Log data-loggers and a miniature truck.

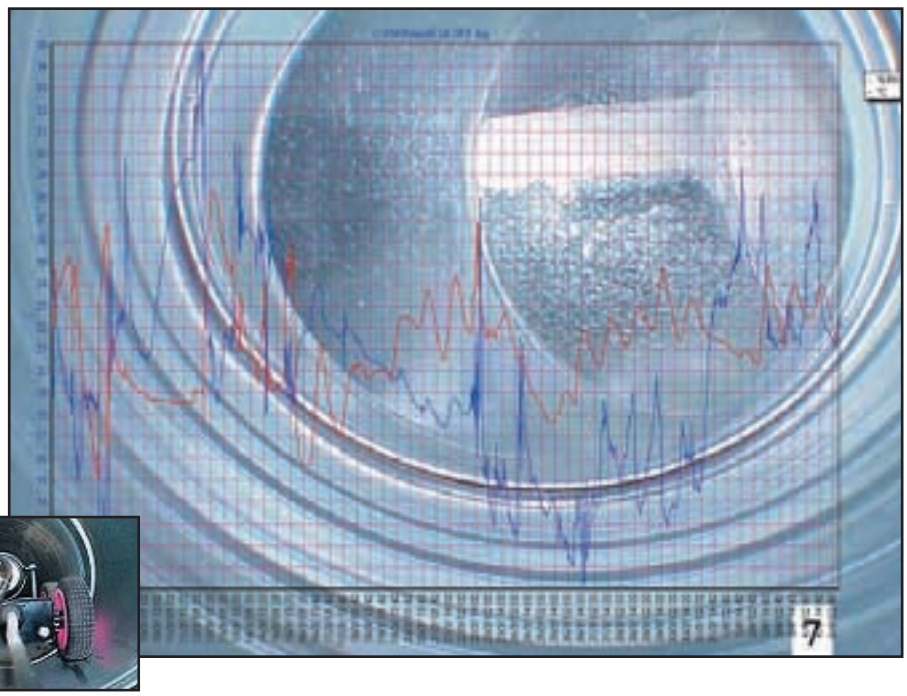


Moisture in ducting encourages microbial activity, typically seen as mould growth on duct surfaces. This not only affects air flow, but also creates areas where bacteria can reproduce. These areas of contamination act as breeding grounds for these undesirable contaminants which carry health risks, and ultimately produce a deterioration of Indoor Air Quality (IAQ).

Inspection of ducting is carried out using a high-resolution colour video camera mounted onto a miniature 'truck', remote-controlled by two joysticks. This identifies areas of dirt build up and contamination, as well as deterioration of fire dampers, blocked airflow valves etc.

The HW3 software provides easy-to-use tools for transferring measurement data from the memory of the HygroLog, and for displaying the data in a user friendly way - including a tool where a photograph can be used as background. The perfect way for Lifa to demonstrate the unique abilities of their innovative equipment!

The ROTRONIC HygroLog is a self contained modular datalogger which uses the interchangeable HygroClip humidity and temperature module. It can store up to 10 000 measurement values over time periods between 20 hours and 416 days. On the shortest time period, HygroLog measures %rh and °C every 15 seconds and when the data is transferred to the PC using the ROTRONIC HW3 software, the humidity measurement can be converted into dewpoint temperature.



When the Lifa remote control truck is fitted with the Hygro-Log datalogger, it is sent through the ducting to find areas where it is likely to find condensation or other kinds of moisture risk.

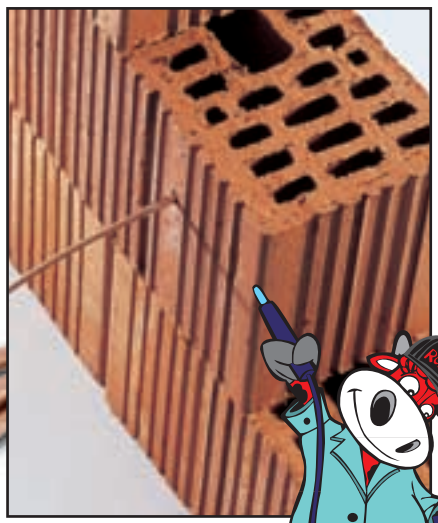
THE NEW MINI PROBE WITH 4 MM DIAMETER

Leonhard Löw
Head of Production
ROTRONIC AG

Back in 1995, ROTRONIC introduced the 5mm diameter 'Mini' probe for measurement of humidity and temperature. It was originally designed for the measurement of the ERH (Equilibrium Relative Humidity) of artefacts in conservation applications such as statues and carvings. Naturally, these ancient works need to be carefully preserved, so having to drill the smallest hole possible to enable measurement of material moisture levels was quite important!

Another important application of the mini probe was the measurement of ERH in concrete. It is a well established procedure to check concrete ERH before floor or wall coverings are applied, to make sure that they fix properly. One method to measure concrete ERH is to drill a hole and insert a %rh probe, in order to create the minimum damage and save costs of drill bits, the smaller the hole the better!

Now ROTRONIC have taken another step forward in the miniaturisation of the Mini probe by introducing a new version which is 20% smaller, its now only 4mm diameter. The HygroClip SCO4 is available with a 2 meter cable between the tiny sensor head and the electronics, so even more spaces which are difficult to access can now be reached. Hence the Mini Probe can be used in a wider range of applications, such as relative humidity and temperature in small containers, packaging tests, mini ducts or climate chambers.



MEASURING WATER ACTIVITY AT THE „MILLENIUM SEED BANK"

Chris Birch
Sales Engineer
ROTRONIC instruments

The Royal Botanic Gardens are using a range of ROTRONIC Instruments to monitor the free or available moisture (water activity) of seeds stored at the Millennium Seed Bank, Wakehurst Place in the South of England.

Sponsored by the Millennium Commission, Orange PLC and the Wellcome trust, the Millennium Seed Bank is an important conservation and research facility storing live seeds in suspended animation for possibly thousands of years, acting as a safe depository for the worlds wild plant species.
Due to the ever increasing spread of humanity, the focus is being directed towards those wild plants most in need of conservation, mainly in tropical dry lands. The seed bank hopes to preserve around 25,000 plant species by the year 2010.

Scientific information obtained from the many rare seeds will be registered on a comprehensive data base, which will be made available to universities, agricultural bodies and organisations in the developing world, thus publishing the contents of the seed bank.

For this ambitious project to be successful the seeds have to remain viable; they are required to germinate after the significant periods of storage involved. Seeds are collected in collaboration with Kew's overseas partners. The seeds are rapidly shipped back to the Seed Bank, where they are separated from their seed casing and dried to 15% Equilibrium Relative Humidity (ERH). They are then frozen and placed in air tight containers for storage at -20°C.

Because of the very low temperature and moisture contents the seeds ability to germinate is suspended. To ensure that the seeds remain in this state, the artificial environment is monitored very carefully, and a sample of each seed is taken periodically and tested for germination, confirming they are still alive. By caring for the seeds in this way, their life span is increased dramatically, they are expected to survive for hundreds and some times thousands of years!

ROTRONIC Instruments provide an exact measure of the Equilibrium Relative Humidity of the seeds before and during storage, they have a high accuracy of +/-1.5%rh, +/-0.3°C at 23°C. They are specially designed to be fast and easy to use, and with a very low drift specification all ROTRONIC Instruments remain accurate over long periods of time.

Keith Manger, the Laboratory Manager for Kew's Seed Conservation Department said, „The seed bank routinely use a range of ROTRONIC Instruments for research and general seed sample measurement. We have worked closely with ROTRONIC to develop our measurement technique".

Products used include the AWVC measurement head with BT-RS and the new HygroLab display unit.

THE NEW TREASURE CHAMPER IN COLOGNE'S CATHEDRAL

Roland Scheurich
Sales Manager
ROTRONIC Messgeräte

After six years of planning and construction, a new "treasure chamber" exhibition in Cologne cathedral sacristy opened in autumn 2000. The exhibition area now extends onto three levels and stretches over 500 square metres. Just entering this unique historical area with a view of the original Roman town wall is well worth a visit.

The treasures belonging to the church include shrines, relics, and many types of accessories used in holy service such as chalices, monstrances, crosses, censers, bowls for chrism and many more. Examples of the crosier, chest crosses, and other insignia of the archbishop of Cologne, as well as chasubles, are also included in the cathedral's treasures. Discoveries from the Franconian graves and examples of the cathedral's high quality sculptures from the middle ages are shown for the first time in the new exhibition.

The concept of the exhibition was developed by the directors of the cathedral's building archives Dr. Rolf Lauer and Dr. Leonie Becks in cooperation with the exhibitions organiser Ingrid Bussenius.

In order for the valuable displays to be sufficiently protected, the Kieler company „Glas + Spiegel Schulz" has been entrusted with the design and manufacture of high quality and technically complex display cases. For humidity and temperature measurement, the Hygro-Clip from ROTRONIC was selected. Its compact construction, interchangeable service concept, modular design, combined with high accuracy and excellent long-term stability made it the natural choice. The religious and historical importance of the treasures meant that only high quality products are specified for use in the exhibition.

The objects are superbly presented through non-reflective glass and the display cases feature custom lighting by specialist designer Daniel Zerlang-Roesch. The costs for the constructing of the treasure chamber amounted to around 15 million German Marks, not including the costs for building renovations.

Hr. Krieg, Hr. Ing. Durstberger, Hr. Hofstadler
Honeywell Austria GmbH, Linz Subsidiary

ROTRONIC
TRANSMITTER FOR THE MUSEUM QUARTER OF VIENNA

Ernst Aringer
Appartement Manager
MEPA Kühnel GmbH

25 years from concept to reality

The outline of the fantastic new Museum Quarter in Vienna is becoming more and more visible. As this ambitious project nears completion, it is worth considering its 25 year history and examining some of the complex and innovative features included.

The origins of the Museum Quarter was at the Imperial court stables. From 1921, the area began to be used for exhibitions of art and culture, and became known as 'Messepalast' (fair palace). In 1977 the idea to open a 'Museum palace' began with the objective to expand the capacity of the federal museums and create an 'island of art' including the Museum of Historical Art and Museum of Natural History.

In November 1986 competitive entries from architects were invited, and the concept of the Museum Quarter was truly born. In 1999 an International jury awarded the project to the engineering firm Ortner & Ortner. After long negotiations and administrative preparation, the construction work began on the 60.000 m² area (culture utilization: 53.000 m²). Completion is fast approaching: This year the Museum Quarter should begin to fulfil its longstanding destiny as a centre for art and cultural events. It will now be possible to present a historical representation of the development of modern art, with of course a focus on Austrian contributions. This cultural centre will also create the perfect forum for many categories of contemporary art, from graphic art to film and architecture to modern theatre.

What the Museum Quarter will include:

Architecture Centre Vienna:
As museum of the modern age, its aim is to preserve, represent and to research, but on the other hand to show new developments in architecture too.

Art Cultural Centre -
Tobacco Museum:
This is the planned cultural platform for Austrian Tabak AG (Austrian Tobacco Company). Examples of 4 centuries of tobacco culture are collected here. By the way, in the Tobacco Museum a ROTRONIC GTL Hygroscope has been in use for ten years.

Hall E + G:
Both halls will be main scene for the Vienna festival weeks as well as

performing locations for other important productions and festivals like the Viennale and the International dancing weeks.

Art Hall Vienna (Kunsthalle):

A gallery dedicated to the contemporary arts. The former winter riding hall was complemented by a functional new building; historical construction engineering meets with modern architecture!

Leopold Museum:

In a new building, the unique collection from Professor Rudolf Leopold, among them the world-famous Schiele-exhibits, will be opened to the public.

Museum Of Modern Art Ludwig Foundation Vienna:

Until now this collection of international art dating from 1900 till to the present day was split between two buildings – the 20 house and the Palais Liechtenstein. From 2001 everything will be located under one roof.

Children's quarter:

Dance, Theatre, Opera and Musicals well suited to children will help future generations appreciate to art and culture.

The various institutions of the Museum Quarter will act autonomously in deciding the displays and events they run, but when it comes to building management issues, they will all work together.

Diagonally through the Museum Quarter runs an 8m deep, 170 m long tunnel which serves as the main supply line for the whole area. All essential utilities such as heating, cooling, communication and electricity run through this subterranean 'backbone'.

The new buildings with their precious contents are a big challenge in view to infrastructure. The exhibition galleries must for example guarantee a temperature of 23°C and a humidity of 55% RH with minimal deviations to preserve priceless antiquities and art. Fluctuating visitor numbers and countless external influences, such as heat produced by numerous spotlights means this is not exactly an easy task. Here the Museum Quarter trusts in the quality of ROTRONIC.

Exposed ventilation ducting in museums such as the Pompidou Centre in Paris, is a thing of the past.

Today, technology should be as invisible as possible to make sure art and antiquities are presented in the best way. In the Viennese Museum quarter, the prevailing room climate is maintained with cooled ceilings, which counteract the heat generated by existing lighting and occupancy. The cooling power required is about 2000 kW which is generated by three huge cooling plants in the fourth basement of the Museum of Modern Art. The maximum ventilation requirement will amount to over 600 000 m³/h.

Honeywell There are three control centers; one for each building complex: Leopold museum, Art-Hall, Museum of Modern Art. The project for the whole climate-control engineering was awarded to Honeywell Austria GmbH, and is managed by an experienced team from the Linz branch office in upper Austria. For many years Honeywell has used ROTRONIC transmitters for all demanding projects, and for the Vienna Museum Quarter F/H-Series transmitters incorporating the HygroClip were specified. A total of 80 wall and duct mount FH Series instruments are used for the measurement of %rh and °C, as well as, 4 DPT series units to measure absolute humidity, and 11 F Series wall mount units monitor %rh and °C in public areas. The majority of the FH transmitters are mounted in the ceiling void where the extract air from the exhibition halls flows to the ventilation ducting. Regular transmitter maintenance and calibration is therefore difficult, so the excellent long term stability of the ROTRONIC products, and the convenience of the HygroClip concept, is a significant advantage. Once per year, a new, or recalibrated HygroClip measurement module is fitted. For anybody interested in art and culture, the Museum Quarter of Vienna will be one of the most important sites in Europe.

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Win a HygroPalm with 4 mm probe

FAX TO: +41 - 1 - 837 00 73

❑ Yes,
I want to win!

Serial number of my GT Instrument:

_____

History of my GT Instrument:

_____

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_____

_____

Sender:

Name: _____

Company: _____

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