



# **ECC Total Service Maintenance, Service and Support**

for users of the  
**ECC Environmentally Controlled Weighing Chambers**

with  
**ultra micro balances**

in the automotive, electronics,  
chemical and pharmaceutical  
industry productions,  
as well as R&D



**The ECC  
Environmentally  
Controlled Chamber  
System  
open for inspection**

**Maintenance, Service and  
Support for the users  
and their technical  
components around the**

**1 µg**

**Weighing Accuracy**

The picture shows :

- The Weighing Chamber on the left hand side
- The Technical Components Box with air conditioning subsystems on the right side
- The Control Unit with PC and screen in front, right (supplementary equipment, left)

The required maintenance consists of Quarterly Revisions and Yearly Revisions, most of the work can be done by the users themselves, after the first revision with the according advanced system instruction. The clients and users can get scientific(white), field service(red) and technical-commercial (blue) support via joint video communication directly to the IKT demo and test lab in

**Switzerland**

## **The ECC Total Service**

The ECC Total Service comprises the following activities:

- **The Maintenance**

is defined to consist of all checks and revisions of the hardware and software components, which are necessary to assure the system operation according to the technical specification for a longer time period (> 1 year). **Without quarterly and yearly revisions no warranty from the supplier.**

- **The Service**

is defined to consist of all technical consulting and deliveries of HW and/or SW which are required by the user. The reasons can be a technical failure, a material damage (within or out of warranty), a need to replace expendable parts, or any specified request from the user.

- **The Support**

is defined to consist of all scientific, technical and commercial consulting from the supplier and its related partners to the user for the optimal use of the ECC system and the related options. This includes a case by case agreed preferred user access to the suppliers demonstration and test center with video communication directly to the IKT experts concerned.

## **The Objectives of the Professional IKT Service for the ECC Systems**

- First, to assure an optimal operation over the life cycle of several years.
- Second, to create a trustful and personal relation between client / user and the supplier's staff by easy direct and visualized communication concerning any above mentioned issues
- Third, to satisfy any client's or user's need with respect to revisions and/or HW/SW deliveries at competitive cost and time.

## **The ECC Environmentally Controlled Chambers to be serviced**

The ECC Chamber System aims to provide the best technical and most cost-efficient environment for ultra micro balance operations. The chamber-controlled environment with a range of client-specific weighing support and efficiency improvement options is intended to ensure optimal practical conditions for typical tasks and applications (10 - 150 or more weighing per day) in the following areas:

- **automotive industry:**  
particulate matter filter weighing (in compliance with new diesel engine emission regulations)
- **chemical, medical and pharmaceutical industry:**  
micro samples and drugs weighing (cleanliness and humidity-sensitive)
- **research and test centers:**  
for all types of sensitive micro samples (see above)

The system comprises an environmentally controlled chamber (mainly temperature and humidity), a technical components box for treating the circulating air as well as a control unit with data presentation facilities. Weighing support software and an automated weighing robotics option is also available. The system is easy to install and most of the maintenance and servicing required can be undertaken by the clients themselves, whatever their location might be.

## **The critical ECC subsystems and components to be serviced are the following :**

### **1. Technical Chamber and Air Conditioning Systems**

- Humidifier , water filter/supply sub-system
- Chiller , heat exchanger sub-system
- Air filter subsystem and components
- Heater subsystem
- Circulating air tube system
- Other technical components



## **2. Temperature and Humidity Sensors**

Checks and re-calibrations

## **3. Environmental Control Unit**

HW / SW checks and periodic operational tests

### **The Quarterly Revisions**

The first Q-Revision should be made within the first 6 months of operation. After about three months the users get quite familiar with the system and some user-specific experimental set-ups get established. At this time a total system check is needed in order to assure the optimal settings and a minimum of future maintenance and service cost. Usually the user participates in an advanced system instruction and then makes the quarterly maintenance with its own technical staff team.

### **The Yearly Revisions**

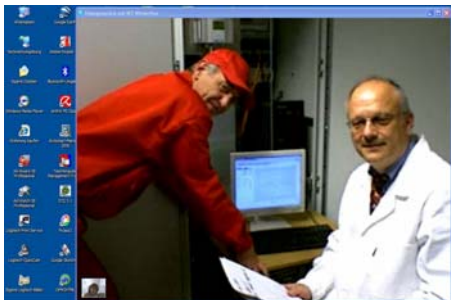
The first Y-Revision should be made after about one year of operation. Like in every air conditioning system there are several technical components to be checked and maintained. In addition to these standard work the vital temperature and humidity sensors have to be recalibrated for quality assurance reasons.

Usually the users can do most of this work also themselves after the first Y-Revision with full local support from the supplier.

### **Service**

Any expendable or damaged components can be delivered either by the supplier IKT or , in some cases, directly from the local / regional OEM component supplier`s service organization (after agreement user/IKT).

### **Support and Communication**



The client and / or user can enter into direct contact to the IKT demo and test center in Switzerland, via video communication. If specially agreed the private contact to the IKT experts can be made which is intended not only for the rapid, visualized discussion and settlement of technical problems but sometimes also for the experimental data interpretation as well as the client`s potential measurement technology modification or development.

### **Commercial**

Any total service activities need to be defined mutually and quoted by IKT. The prices depend on the subject and the client`s location, among other factors. Expenditures within warranty need a special experimental report and the IKT confirmation of acceptance. Generally there is a down-payment clause with amounts of 50%.

### **General Warranty Clause**

IKT AG provides a 12 month warranty for the functional operation of the ECC system concerned after initial installation and customer acceptance (date of acceptance statement) by replacement or repair of failed components due to defects in material or workmanship, but excluding expendable parts (such as filters or specific gaskets), and under the condition of proper handling by the operating staff. The latter requires the successful completion of an "Advanced Staff Training" during the original installation and/or the timely Quarterly Revision and Check as well as the first Yearly Revision.

### **General Liability Clause**

IKT AG will only be liable for direct damages of the ECC System and its components under the condition of proper handling by the user according to the ECC specification, user manual and successful participation of the first timely Q- and Y- Revisions. But such occurred claims for liability are restricted to the total price of the delivered system at maximum. IKT AG will under no circumstances be liable for indirect damages, incidental or consequential, or third party damages.



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for environmentally-controlled weighing chamber systems and measurement analysis