

– INDEX –

<b>COMPANY BACKGROUND.....</b>	<b>- 3 -</b>
<b>WHY INSEL? .....</b>	<b>- 5 -</b>
OUR EXPERIENCE .....	- 5 -
OUR STAFF .....	- 5 -
METHOD OF OPERATION .....	- 5 -
DOCUMENTATION .....	- 5 -
TURN-KEY SOLUTIONS .....	- 5 -
PROJECT DEVELOPMENT .....	- 6 -
SERVICE AND MAINTENANCE .....	- 6 -
REPRESENTATION NETWORK .....	- 6 -
OUR WEBLINKS .....	- 6 -
<b>WHEN INSEL IS NOT THE RIGHT SOLUTION PARTNER FOR YOU? .....</b>	<b>- 7 -</b>
<b>DETAILED COMPANY INFORMATION .....</b>	<b>- 8 -</b>
<i>Pharmaceutical Industry .....</i>	<i>- 11 -</i>
<i>CleanRoom .....</i>	<i>- 12 -</i>
<i>Hospitals.....</i>	<i>- 13 -</i>
<i>Laboratories .....</i>	<i>- 14 -</i>
<i>Precise Measuring Rooms .....</i>	<i>- 15 -</i>
<i>Food Industry.....</i>	<i>- 16 -</i>
<i>Data Processing Centers and Telecommunication Switchboards.....</i>	<i>- 17 -</i>
<i>Filter Technology .....</i>	<i>- 18 -</i>
<i>Disinfection Systems.....</i>	<i>- 19 -</i>
<i>Construction Equipment Systems .....</i>	<i>- 20 -</i>
<b>GENERAL SCOPE OF THE WORKS PERFORMED BY INSEL .....</b>	<b>- 23 -</b>
SYSTEM CONSULTANCY .....	- 23 -
MAIN SOLUTION.....	- 23 -
PREPARATION OF AS-BUILT PROJECTS.....	- 23 -
PREPARATION OF DOCUMENTS .....	- 23 -
SERVICE AND MAINTENANCE.....	- 23 -
<b>ORGANIZATION.....</b>	<b>- 24 -</b>
<b>GENERAL PROJECT IMPLEMENTATION STRATEGIES .....</b>	<b>- 25 -</b>
<b>QUALITY POLICY.....</b>	<b>- 27 -</b>
<b>APPLICABLE QUALITY ASSURANCE METHODOLOGY.....</b>	<b>- 28 -</b>
<b>TECHNOLOGICAL BACKGROUND .....</b>	<b>- 29 -</b>
MEASURING AND TESTING EQUIPMENT/ INSTRUMENTS .....	- 30 -
TRANSPORTATION VEHICLES.....	- 30 -
<b>REPRESENTED COMPANIES .....</b>	<b>- 31 -</b>
BDK.....	- 32 -
SKAN.....	- 33 -
FREUDENBERG – VILEDON .....	- 34 -
AHLBERG + HENNRICH GMBH .....	- 35 -
WEISS GWE.....	- 36 -
RITTERWAND GmbH & Co. ....	- 37 -
SUNCOMBE .....	- 38 -
LEONHARD WEISS .....	- 39 -
MCRT .....	- 40 -
LETZNER .....	- 41 -



---

ARIAS.....	- 42 -
M+W ZANDER .....	- 43 -
<b>REFERENCES: (SHORT DESCRIPTION) .....</b>	<b>- 44 -</b>

## COMPANY BACKGROUND

<b>Trade Name</b>	İNSEL Yapi ve Teknik Donatim Sistemleri Ltd.Sti.
<b>Full Address</b>	İçerenköy Mah. Şehitler Cami Sok. No:4-B TR-34752 Ataşehir İstanbul
<b>Telephone</b>	+90 216 573 09 35
<b>Fax</b>	+90 216 573 09 96
<b>Web Address</b>	<a href="http://www.inselltd.com">www.inselltd.com</a>
<b>E-Mail</b>	<a href="mailto:info@inselltd.com">info@inselltd.com</a>
<b>Year of Establishment</b>	1995
<b>Short History</b>	İNSEL Yapi Teknik Donatim Ltd. Sti., which was established in 1995, specializes in turn-key construction technical equipment and air-conditioning systems. Also consumables and disinfection systems for pharmaceuticals, intensive care units and veterinary vaccine factories.
<b>Headcount</b>	68 permanent staff members subject to increases depending on the workers employed on worksites on temporary basis.
<b>Fields of Operation</b>	<ul style="list-style-type: none"><li>• Schools and office premises,</li><li>• Factories and production sites,</li><li>• Precise measuring rooms,</li><li>• System rooms,</li><li>• Data processing centers,</li><li>• Testing rooms,</li><li>• Pharmaceutical industry and its subsidiary industries,</li><li>• Hospitals,</li><li>• Microbiology laboratories,</li><li>• Food industry,</li><li>• Class 10, 100, 1.000, 10,000 and 100,000 fields according to GMP, FDA, PIC, ISO 14644, US Fed.209 and DIN 1946/4 requirements.</li></ul>
<b>Services</b>	<ul style="list-style-type: none"><li>• Design,</li><li>• Consultancy,</li><li>• Project development and Engineering,</li><li>• Mechanical contracting,</li><li>• Supply of equipment for Clean and Sterile Production Sites,</li><li>• Pharmaceutical Water Systems,</li><li>• Turn-key Clean and Sterile Areas,</li><li>• After-sales services,</li><li>• Supply of consumables for Clean and Sterile Production Sites,</li><li>• Supply of disinfection systems and disinfectants</li><li>• Qualification,</li><li>• Validation,</li><li>• GMP Documentation,</li><li>• Training,</li></ul>

**Products Represented**

- Air conditioning plants,
- Precision air conditioners,
- Air conditioning system ducting equipment,
- Hygienic air conditioning equipment,
- Operating theatre ceiling units,
- Air drying equipment,
- Clean Room wall and ceiling panels,
- Weighing and Sampling cabins,
- Pharmaterazzo floorings, (for pharmaceutical industry)
- Laminar flow cabins,
- Sterilized testing cabins,
- Clean water systems,
- Insulators,
- Filters,
- Dust collecting systems,
- Microbiologic safety cabins,
- Air showers,
- Chemical counters,
- Consumables (for pharmaceutical industry),
- Disinfection systems,
- Disinfectants

## WHY INSEL?

### Our Experience



İNSEL Yapi ve Teknik Donatım Sistemleri Ltd., which aims at offering economic, high quality, reliable and long-life turn-key solutions in line with the goals of its customers, specializes particularly in the construction of clean and sterile areas and precise measuring rooms needed by the pharmaceutical industry and hospitals as well as the office premises, schools, shopping malls and mechanical systems for factories. We have implemented unique and specialized projects, which were implemented for the first time in Turkey and which required years of knowledge and experienced, such as production sites with clean room class 10 or precise measuring rooms with heat invariant  $\pm 0.1$  K or dry room projects with 1 % humidity at 22 °C.

### Our Staff



The implementation of exclusive and unique projects beyond the ordinary lines of business such as clean and sterile areas and dry rooms requires a staff of specialized and well-experienced staff members, who keep track with the innovations, and who collaborate in harmony. All our staff members, including the project engineers and the field staff, are competent and well-experienced professionals, who are employed after undergoing both in-house and external training processes.

### Method of Operation



Having primarily analyzed your needs; we implement our projects to materialize the solution developed jointly with your officials in flexibility to prevent any business interruptions on your side. Eventually, we deliver you a long-life, low energy consuming and reliable facility on the basis of the inspections and tests maintained at all stages from the selection of materials and after the actual implementation and the documentation prepared in respect thereof.

### Documentation



We have experience in the preparation of DQ, IQ and OQ documents in accordance with the ISO 14644, FDA and GMP requirements, which necessitate field specialization, as well as the preparation of the standard documentations drawn up for general construction technical equipment systems, heating, cooling, air-conditioning and installation systems.

### Turn-Key Solutions



İNSEL provides holistic project development, planning, material selection, at-home and in-abroad organization, implementation, assemblage, system start-up, system training, after-sales service and consumable supply services with a view to be the sole responsible to its customers where necessary. İNSEL is capable of assuming the sole responsibility toward you, its esteemed customers, by carrying out not only mechanical systems but also wall panel, flooring, ceiling system, gas and compressed ventilation installation and laminar flow cabins and the like applications.

### **Project Development**



Thanks to the development group constituted as a consequence of keeping close track with the innovations, advancing technology and novel methodologies; we offer you long-life and reliable solutions with low investment and operational costs in line with our experience and the tests we conduct.

### **Service and Maintenance**



We also undertake a complete and regular maintenance and service in respect of the works we contract. In the cases of periodical maintenance contract, we not only warrant the faultless operation of your facility but also the economic use and the protection of the value thereof.

### **Representation Network**



We represent specialized brands with worldwide reputation in Turkey and employ the products thereof in the projects we implement. Therefore, we are well-experienced in the deployment and the employment in the best fashion of such interrelated and interconnected equipment.

### **Our Weblinks**



You are welcome to log in our website, created by the cutting-edge information technologies, by your unique user name and password and check the progress of your project and intervene or notify our party of your demanded modifications at anytime, anywhere.

## **When INSEL is NOT the Right Solution Partner for YOU?**

**When you have to get the “cheapest” system;** INSEL is using and representing the high quality products while implementing systems. When you compare the reasonably cheap products in the market with the advantages of our system those products are not the “cheapest” products.

**When ENERGY expenditure is NOT IMPORTANT for you, especially in Cleanroom Systems;** While planning a cleanroom system, INSEL takes into consideration that air conditioning will work for 24 hours a day and 365 days a year and takes precautions for the lowest energy expenditure. INSEL does not support cheap initial investment cost solutions, which will give harm to environment and national economy in a long life term.

**When system implementation quality is NOT important for you;** INSEL implements specialistic systems with long time employed, trained and experienced workers in its structure. Labor costs of high qualified and experienced specialists are much more than a standard non-skilled labor. On the other hand, having system which works non-stop with long-life cycle and has low energy costs are not possible by using only the high quality products, but also the specialists.

**When you are NOT taking personnel safety in the first place;** INSEL adopts in principle to take every precaution for the people safety who will work with implemented systems. INSEL does not give up from these precautions for lowering the costs.

**When you DON'T care about environmental pollution;** INSEL gives a big importance to the environmental protection as working the personnel on the implemented systems. INSEL does not implement the systems which ignores the precautions for lowering the investment cost.

**When you are NOT interested on the system's work after guarantee period;** INSEL, takes complete customer satisfaction into the first place, makes the material selection and implementation according to this. INSEL assures that the implemented systems will have a long life cycle and operate problem-free.

**When you DON'T want INSEL to have a profit “for this time”;** Employees of INSEL uses their knowledge, experience and workman quality at the highest. INSEL, implements the system with optimized investment cost and low energy expenditure by selecting the qualified materials to the system. INSEL has to make a profit for training its employees, not lowering service quality and continuing with improving these benefits to its customers.

## DETAILED COMPANY INFORMATION

### History



İNSEL Yapi ve Teknik Donatım Ltd. Şti., established in 1995 as a subsidiary of Planung Engineering Management GmbH, which had been offering technical consultancy in respect of the GTZ (der Deutschen Gesellschaft für Technische Zusammenarbeit) projects since 1975. İNSEL is specialized in the mechanical installation of office, school and factory premises and turn-key Clean and Sterile Area construction technical equipment and air-conditioning.

Our company, which has commenced its implementation operations by contracting the construction technical equipment of the facilities in Kartal of Siemens, has implemented the mechanical installation systems of shopping mall, office and school premises projects such as Karstadt Istanbul, Metro Bursa, Kuhne Nagel, Koc High School, Nobel, Nobel AFF, Kazakhstan and Samal, Kazakhstan.

İNSEL has also successfully realized the projects for the laboratories of National Meteorology Institute, which was the first precise heat and humidity control (22° C +/- 0.1° K) laboratory project to be implemented in Turkey, the P3 tuberculosis laboratory, being the first laboratory project in Turkey to requiring high-level microbiological protection, jointly with Japan International Cooperation Agency (JICA), and the SAGE projects, which were also remarked as a first in Turkey for the maintenance of 1 % maximum humidity at 22°C within a space of 50 m<sup>3</sup>, all of which required specialized knowledge.

İNSEL, which has specialized in the construction technical equipment systems and air-conditioning of Clean and Sterile Areas in miscellaneous fields as well as material supply through the implementation of the class 10-10,000 Clean Room System for Tubitak-UEKAE, being the only chip production institute in Turkey, as well as the projects implemented for DEPA (a subsidiary of DEVA Holding), operating in the field of production of medical active agents, and for Plantaforma, Ulkar Kimya, Abdi Ibrahim, Sanovel Ilac and Biofarma, which produce pharmaceuticals, the clean room system of the electronic laboratory of Sabanci University, and Roketsan, Aselsan, MESA hospital, Yeditepe University Eye Hospital, has broadened its fields of operation by acting as the representative of numerous international companies operating in the aforesaid fields.

İNSEL Yapi Teknik Donatım Ltd., which has commenced its operations in the field of Clean and Sterile Areas with the installation of air-conditioning systems, has thereafter entered into contractual relations to act as the representatives of reputable companies supplying miscellaneous items used for integrated planning, wall and ceiling systems, floorings, weighing and sampling cabins, laminar flow units and consumables such as clothing and has further broadened its fields of operations to the extent to provide complete services particularly for pharmaceutical production sites, including Clean Room planning, turn-key contracting, laminar flow cabins and clothing supply.

## **Staff**

**İNSEL Yapi ve Teknik Donatim Ltd. Sti.**, which currently maintains its operations through a permanent staff of 68 members, is capable of expanding the headcount of its on-site staff wherever any project requires through its contractors, which are controlled thereby and run by its former employees.

Sinan Ceran, a shareholder of the company, was graduated from the department of Industrial Engineering of Istanbul Kultur University and obtained his master's degree at the department of International Quality Management of Marmara University, while Metin Kenter, another shareholder, was graduated from the department of Heat and Energy Engineering of Giessen University of Applied Sciences in Germany, and Gunan Onay, another shareholder, was graduated from the department of Heat Processing of Faculty of Mechanical Engineering of Yildiz Technical University.

Metin Kenter, a shareholder, started his career as a Clean and Sterile Area development engineer in Babcock BSH, based in Germany, in 1984, and then worked for Weiss Klimatechnik as Clean Room development engineer, project engineer, sales engineers, Clean Room department manager, Hessen/Germany regional sales manager, Balkans and Middle East sales manager and Istanbul liaison office manager, respectively, and has been involved in the construction of over 250 Clean and Sterile Production Sites in various fields throughout his professional career.

Electrical Engineer	1
Chemical Engineer	1
Industrial Engineers	1
Mechanical Engineers	15
Architects	3
Lawyer	2
Accounting Staff	3
Technicians	13
Purchasing staff	3
Foremen	5
Qualified Workers	16
Secretaries	2
Office Helpers	3

The headcount of the staff may be expanded on temporary basis, depending on the Project requirements.

**Fields of Operation** INSEL, which aims at offering economic, high quality, reliable, low energy consuming and long-life turn-key solutions that serve best to the goals of its customers, specializes in the following fields:

- Mechanical installations and construction technical equipment systems for school, office and factory premises,
- Construction of air-conditioning, heating, cooling, sanitary installation, wall, flooring, ceiling and enlightenment systems in accordance with the GMP and FDA requirements of the sterile areas in the production sites of pharmaceutical industry and its subsidiary industries,
- Turn-key construction of “dust-free” environments, where the works such as semiconductors production and optical coatings are performed, and of Clean Rooms,
- Fine construction and particularly air-conditioning of sterile areas in hospitals,
- Air-conditioning of microbiological laboratories,
- Air-conditioning and flooring of clean and sterile areas necessary for food industry,
- Air-conditioning of quality control and calibration laboratories,

**Pharmaceutical  
Industry**

The production processes in the pharmaceutical industry and the subsidiary industries thereof should be carried out in sterile areas with a view to ensure that the products are not damaged by germs, different products do not mix and the period of stability of pharmaceuticals is prolonged.



Moreover, it is of utmost importance that the staff members working in the production environment are not affected by the product and some products are not exposed to the atmosphere. In that regards; the correct flooring, wall and ceiling system selection and the heat, humidity and particle rate in the air considerably affect the product quality. Given the fact that the air-conditioning in particularly the sterile areas should operate uninterruptedly; the importance of the operation of a correctly planned system of correctly selected equipment under low operating costs without compromising sterility for the maintenance of the pressure differences among the rooms and the prevention of contamination to the pharmaceutical factories is undeniable within today's competitive environment.

**İNSEL** operates with a years of experience through a broad range of services and products from design to implementation and from material selection to servicing in the construction and configuration of sterile environments in accordance with the GMP and FDA requirements, and prepares IQ and DQ documents in respect of its works, and further conducts particle measurements, filter sealing tests and plus-minus pressure checks.



Moreover, **İNSEL** acts as the representative of Europe-based companies, which manufacture hygienic air-conditioners, employed in the pharmaceutical production processes, air conditioning plants, fiber and dust precipitators, laminar flow units and cabins, sampling, filling and weighing cabins, filters, textile ductwork systems, Clean room Wall and Ceiling systems and Floorings (PHARMATERAZZO).

## CleanRoom

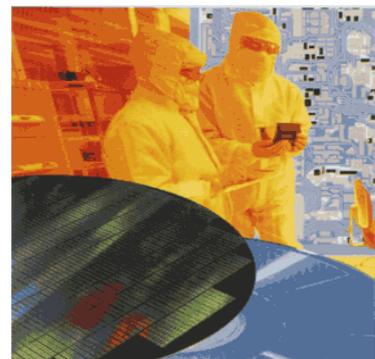
The maintenance of high quality and efficiency with the production and assembly performed in Clean Rooms strictly requires the prevention of the inflow of external particles and cross contamination. Besides, it is essential to reliably ensure and maintain the most appropriate heat and humidity for the product and the tolerances thereof. The reliability, economic nature and the long-life of Clean Rooms, which should essentially be designed and implemented in customized manner to address your needs, require a broad experience, material selection and an extremely precise working process particularly at the implementation stage.



**İNSEL** provides you with the following services as it ensures the customized construction and configuration of your clean rooms through constant dialogue at all stages, starting from the design of your premises:

- Integrated design,
- Turn-key implementation,
- Wall, ceiling, enlightenment and flooring systems,
- Clean gas and water systems,
- Modernization of existing Clean Rooms,
- Selection of appropriate furniture and consumables with respect to the clean room requirements, and
- Staff training.

**İNSEL** further acts as the representative of Europe-based companies, which manufacture precise control and compact air-conditioners, air-conditioning plants, laminar flow units and cabins, filters, textile ductwork systems, clean room wall and ceiling systems and clean air and gas piping systems employed in Clean Rooms.



## Hospitals

One of the most critical factors to ensure the healthcare staff, nurses and doctors to practice their skills in the best fashion possible in hospital for the protection of the health of the patients is to minimize the infection risk. The right selection of the sterile air-conditioning system and configuration with respect to the needs plays an as important role as the staff discipline in the minimization of the post-operation infections and the level of success of operations.



Thus, the matters as to what operations are intended to be conducted in the operating theatre at issue as well as the maximum number of persons are to be present and what equipment are to be employed therein and what air-conditioning requirements are to be satisfied should be determined jointly with the surgeons and nurses during the selection of the right sterile air conditioning system. Due consideration should be given during the planning stage to not only the cleanliness of air but also the investment and particularly the operating costs. Therefore, the modern operating theatres should be designed in accordance with the peculiar characteristics required for the staff, patients, equipment and operation method.

**İNSEL** prepares the concepts in the manner to ensure economic operation and low operating costs at the earlier stages of planning through specialized staff thereof, and guarantees the sterile area to function reliably even long after the start-up.



**İNSEL** further acts as the representative of Europe-based companies, which manufacture hygienic air-conditioners, air-conditioning plants, fiber and dust precipitators, and laminar flow units and filters for operating theatres employed in hospitals.

## Laboratories

The reliable conduct of the R&D activities, quality controls and analysis in the pharmaceutical industry, food industry, chemical industry and the hospitals requires the control of the plus and minus pressures and the air-conditioning requirements. Specifically in microbiology laboratories; the staff members should be protected and the environment should be preserved via air-conditioning, which should also ensure and maintain the required pressure, humidity and heat tolerances.



**İNSEL** offers turn-key laboratory solutions in numerous protection classes such as **P1, P2, P3** and **P4**, where microbiological genetic researches are conducted in accordance with the globally recognized standards, at all stages from planning to implementation and servicing on the basis of its years of experience.

**İNSEL** further acts as the representative of Europe-based companies, which manufacture hygienic and precise air-conditioners, air-conditioning plants, fume hood systems, laminar flow units, flooring systems and filters for operating theatres employed in laboratories.



**Precise Measuring  
Rooms**

Stable air-conditions should be provided for the precise measuring rooms and laboratories of various lines of industry such as automotive, electronics, optics, paper and etc. with a view to ensure that the products can be properly developed, quality controls can be properly conducted and the quality of the products can be maintained and even improved. Besides, the calibration of several production equipment and measuring instruments should be performed in isolated environment preserved from any external impacts as the temperature and the humidity is stabled.



It is the usual case for such rooms that the heat tolerance requirement is  $\pm 0.1$  K/h or the humidity tolerance requirement is  $\pm 2$  %. For all laboratories, the reliable conduct and the repeatability of the processes particularly require the extremely fine and sensitive planning of the interior architecture and the air-conditioning systems.

**İNŞEL** offers turn-key service in respect of the construction and configuration of quality control laboratories and precise measuring rooms in accordance with all globally accepted and recognized standards from planning to implementation and servicing through its specialized staff.

## **Food Industry**

The long-life and the correct selection to address the needs of not only the air-conditioning system but also the construction play a crucial role for the maintenance of the quality of the healthy and high quality of the food stuff you produce, the prevention of the product from being damaged from germs and fungi and the minimization of the necessary level of additives, which enhance the endurance of the food.



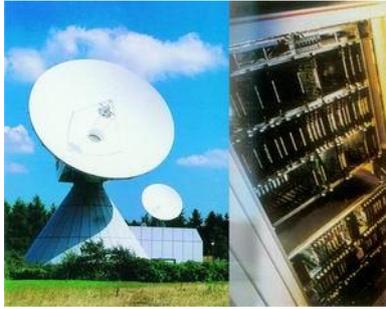
**İNSEL** prepares the concepts for air-conditioning of hygienic production sites and particularly durable and hygienic flooring systems in the manner to ensure economic operation and low operating costs at the earlier stages of planning through specialized staff thereof, and guarantees the production site to function reliably even long after the start-up.

**İNSEL** further acts as the representative of Europe-based companies, which manufacture hygienic air-conditioners, air-conditioning plants, fiber and dust precipitators, laminar flow units, flooring systems (PHARMATERAZZO) and filters for the food industry.



**Data Processing  
Centers and  
Telecommunication  
Switchboards**

The computers in the data processing centers, and the equipment within the systems such as the main landline and GSM switchboards, control rooms and internet service rooms radiate a great deal of heat. Especially in the summer, the raising temperature in such spaces jeopardizes the safe operation of the systems and causes them to completely collapse, and therefore leads to huge losses.



One of the essential equipment, which ensures the faultless operation of such systems, is the precision air-conditioners. Such air-conditioners should be operating reliably, be long-life, be rapidly and easily maintainable, be operable during the performance of overall maintenance and causing low operating costs.

**İNSEL** acts as the representative of the very companies, which are specialized and offer a broad range of products in this field. **İNSEL** offers you a broad range of services and products through its professional experience from the planning stage to implementation and from maintenance to servicing in the selection of reliable and economic equipment and the air-conditioning of system rooms.

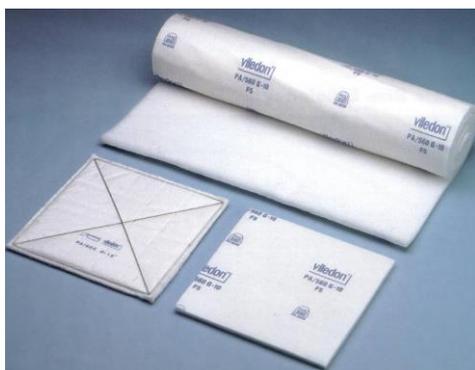
## Filter Technology

The fact that modern people live in large buildings, which necessitate air-conditioning, the environmental pollution, the advanced production methods and the need to create clean environments to enhance efficiency give prominence to the requirement of the flawless and reliable cleansing of the air from the harmful gases, microorganisms and dusts in hospitals, which are directly related to human health, and the environments, where medicines and food stuff are produced. The filtration is required not only for the air supplied to the interior environments but also for the gases, which arise from production and may be hazardous for the environment, and the waste air, which may lead to microbiological pollution. Thus, filters play a crucial role in the reliable operation, the long-life and the low energy consumption of the air-conditioning systems.



**İNSEL** offers you any alternative s for the right selection of customized solutions addressing to your needs with a view to ensure the low operating costs and reliable long service life of the system, in which the filters of any ventilation, air-conditioning and waste air system may be deployed..

**İNSEL** is also distributor for water filters applicable in hospitals, laboratories, dialysis centers and other health sectors. In this type of sectors it is important to protect man's health and environmental pollution by filtering waste water. The filters are capable to hold back %100 endotoxin and are therefore of real great importance for man and environment.



Concerning air conditioning our company offers e.g. G3-G4 roll filters\_ and pocket filters, F5-F9 filters, combined dust and odor filters eliminating or reducing pollutant gases and unwanted odors, H11- H14 HEPA filters, as well as U15-U17 filters. For water systems, cross-flow filters, cartridge filters, capsule filters, and %100 endotoxin eliminating filters. These filters consist of fiber, nylon, polypropylene, microfiber or Teflon.

## Disinfection Systems

In the industries like Pharmaceutical, Cleanrooms, Hospitals, dialysis centers, biotechnology laboratories and food manufacturing disinfection is very important to protect human health, environment and product safety. You should regularly remove the contact of your product to micro organisms like, viruses, moulds, yeasts, bacteria, spores and germs.



**İNŞEL** has the representation of system called Dry Fog system . This system is produced by the help of pharmaceutical companies and it is designed especially for pharma industry. This system is fully autoclave able and made from stainless steel.

In the recent days we see that choosing a system with economical operating costs which is working correctly, fast and effective without carcinogenic chemicals like formaldehyde is very important. To work safe in these kinds of places you should choose a system which is planned correctly for preventing decontamination and protecting your product, environment, and equipments with health.

**İNŞEL** provides a wide range of services to his customers through the long ages of job experiences. These services are starting from configuring your sterile areas according to GMP and FDA requirements with designing, to implementing, material choosing to commissioning, after sales services to consumables and disinfection systems.

**İNŞEL** does not leave you after constructing your system; Also walks with you all the time to make the system work correctly, hygienic and effective.



**İNŞEL** also has the representations of the manufacturing companies which provide disinfectants, sterilants, re-usable and disposable garments, vacuum cleaners, gloves, wipers, endotoxin removal filters, HVAC filters, shoes, block notes, papers and cleaning equipments especially for these industries.

## Construction Equipment Systems



In offices, factories or buildings like shopping malls, mechanical installation systems are very important for the people working there. To work in a healthy and comfortable place the construction technical equipment systems should have low operating costs with long-life durability and reliability in order to ensure that people, who live and work inside that building are in a healthy and comfortable environment. This also increases the effectiveness of the work.

**İNŞEL** adopts in principle to give full service turn-key project solutions according to customers' needs for a high quality, and has economical, reliable and long life cycle solutions in every step starting from planning to installation and after sales. For being the only responsible authority to customers, **İNŞEL**, provides the following services, holistic project development, planning, material choose, implementing, installation, system start-up and training, after sales services and consumables.

In that regards, **İNŞEL** plans and implements the following systems on turn-key basis in the customized manner;

- Heating,
- Cooling,
- Air-conditioning,
- Electricity,
- Clean and waste water,
- Fire and Safety, and
- Wall panels, suspended ceiling systems and floorings.



## **Services**

İNSEL Yapi ve Teknik Donatım Ltd. provides the following services on integrated basis in the fields of particularly the integrated mechanical installation works, heating, cooling, air-conditioning, sanitary installations, wall and suspended ceiling systems and floorings with a view to be the sole responsible toward its customers on the aforesaid matters:

- project development,
- planning,
- material selection,
- at-home and in-abroad organization,
- contracting, implementation,
- system start-up and system training,
- preparation of documents, and
- after-sales services.

İNSEL further provides the following services in addition to the foregoing in the pharmaceutical industry and its subsidiary industries;

- Preparation of concept and basic projects and detail drawings,
- Preparation of DQ, IQ and OQ documents,
- Preliminary works for qualification and validation, and
- Conduct of required measurements.

## **Equipment**

İNSEL further offers the following products, which are employed for construction technical equipment systems and clean and sterile areas.

- Air conditioning plants,
- Precision air conditioners,
- Air conditioning system ducting equipment,
- Hygienic air conditioning equipment,
- Air drying equipment,
- Wall and ceiling panels,
- Weighing and Sampling cabins,
- Pharmaterazzo floorings, (for pharmaceutical industry)
- Laminar flow cabins,
- Sterilized testing cabins,
- Insulators,
- Filters,
- Microbiologic safety cabins,
- Air showers,
- Consumables (for pharmaceutical industry),

**Represented Companies** INSEL acts as the representative of Europe- and USA-based companies, which manufacture the materials, supplies and equipment employed particularly for the clean room systems.



**GERMANY**

- Clean Room Wall panels employed for Clean and Sterile production sites,
- Ceiling Systems employed for Clean and Sterile production sites,
- Pass Boxes
- Filters employed for Clean and Sterile production sites,
- Air drying equipment,
- Sterile Area Floorings (PHARMATERAZZO),
  
- Weighing, Sampling and Filling Cabins,
- Air Showers,
- Laminar Flow Units and Cabins,
- Microbiological Safety Cabins,
- Chemical counters for the production of semiconductors,
- Special clean room systems,
- Filter fan modules,
- Clothing, gloves, footwear and the like equipment used in clean rooms and sterile areas,
- Dust precipitators,
- Clean water systems,
- Sterilized testing insulators,
  
- Insulators used for pharmaceutical production,
  
- Disinfectant systems, sterilants and 100 % endotoxin containing filters.

**RITTERWAND**

**RITTERWAND**

**RITTERWAND**

**FREUDENBERG – VILEDON**

**AHLBERG & HENNRICH**

**LEONHARD WEISS**

**WEISS – GWE\***

**BDK, WEISS – GWE**

**BDK**

**BDK**

**ARIAS**

**MCRT\***

**M+W Zander**

**BASAN**

**HET-ANKE**

**LETZNER\***

**SKAN**

**BDK,**

**SKAN**

**TOMI SteraMist**



**SWITZERLAND**



**GERMANY,  
SWITZERLAND**



**USA**

(There are Gentlemen Agreements acknowledged with the companies marked with \*)

## **GENERAL SCOPE OF THE WORKS PERFORMED BY INSEL**

The general scope of the works performed by INSEL Yapi ve Teknik Donatim Sistemleri Ltd. Sti. is provided as follows:

### **System Consultancy**



**İNSEL** reviews each of the stages in your system such as the parameters like the building infrastructure, material and staff flow, discusses the possible suitable solutions with you, and prepares the most appropriate preliminary project under the light of the necessary arrangements.

### **Main Solution**



**İNSEL** provides you with a main solution applicable for the final design on the basis of the data obtained as a consequence of the consultancy services in details and allows you to review it at the counters of the concerned public authorities, departments and other authorities for licensing procedures.

### **Preparation of As-Built Projects**



This stage contains the determination of all system and installation units, application to the drawings of the determined solutions with due consideration to all specific conditions, the required calculations, measurements, and the identification, dimensioning and the design of the complete facility. Once the as-built project is approved by your party, the materials will be ordered and the implementation will be commenced.

### **Preparation of Documents**



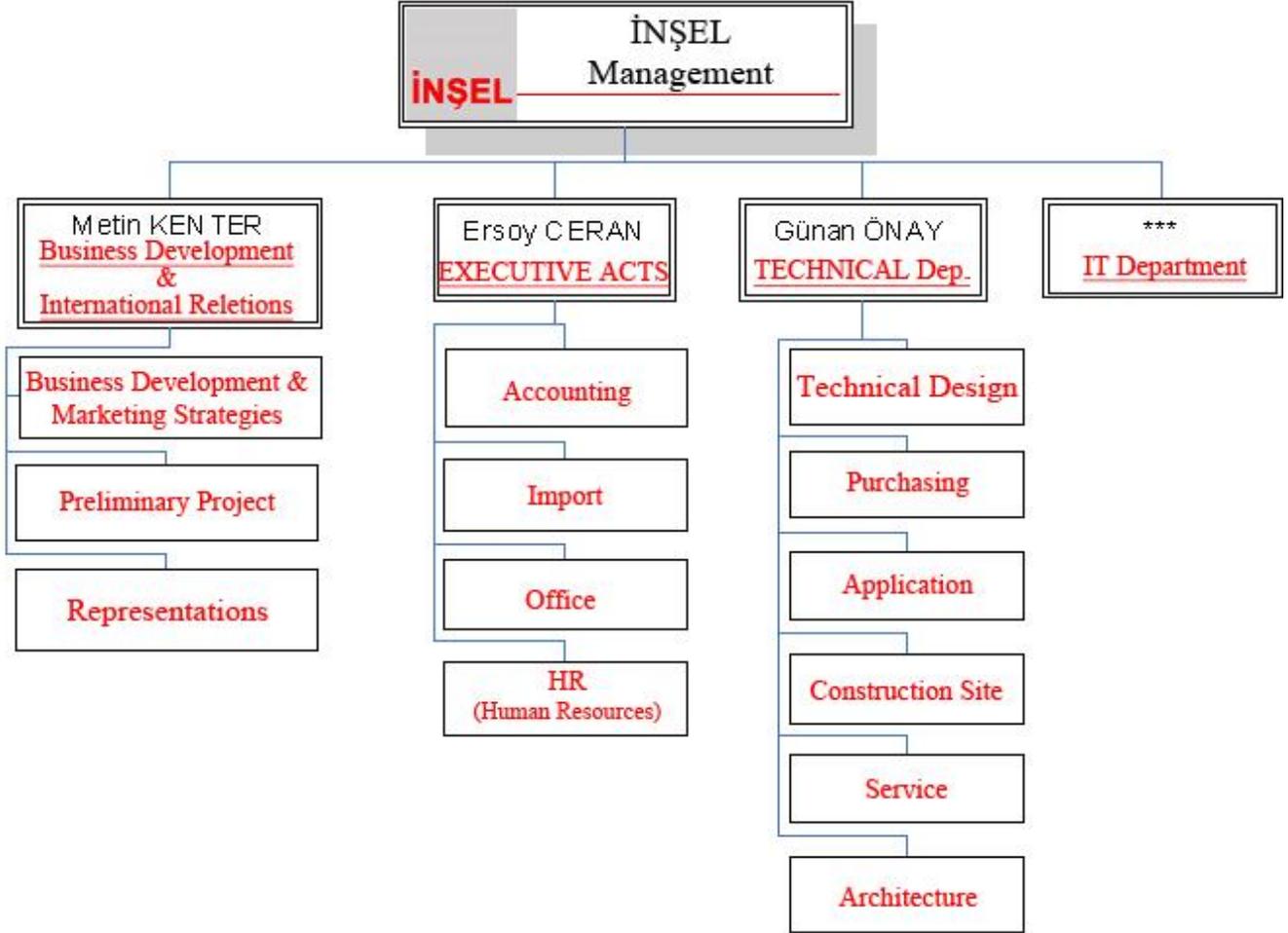
The heating, cooling, air-conditioning and installation system documents in respect of the overall construction technical equipment systems, and the documents prepared in accordance with the ISO 14644, DIN 1946/4, FDA and GMP requirements in respect of the Clean Room systems will be properly prepared and provided upon the completion of projects.

### **Service and Maintenance**



**İNSEL** also undertakes a complete and regular maintenance and service in respect of the works contracted thereby. In the cases of periodical maintenance contracts, **İNSEL** warrants not only the faultless operation of the facility at issue but also the economic use and the protection of the value thereof.

**ORGANIZATION**



## GENERAL PROJECT IMPLEMENTATION STRATEGIES

İNSEL Yapi ve Teknik Donatım Sistemleri Ltd. is capable of contracting the following works in the following fields in integrated manner as the sole responsible contractor toward the customers thereof in respect of the implementation of construction technical equipment projects through its well-experienced staff;

**Mechanical:** Heating, cooling, air-conditioning and sanitary installation systems,

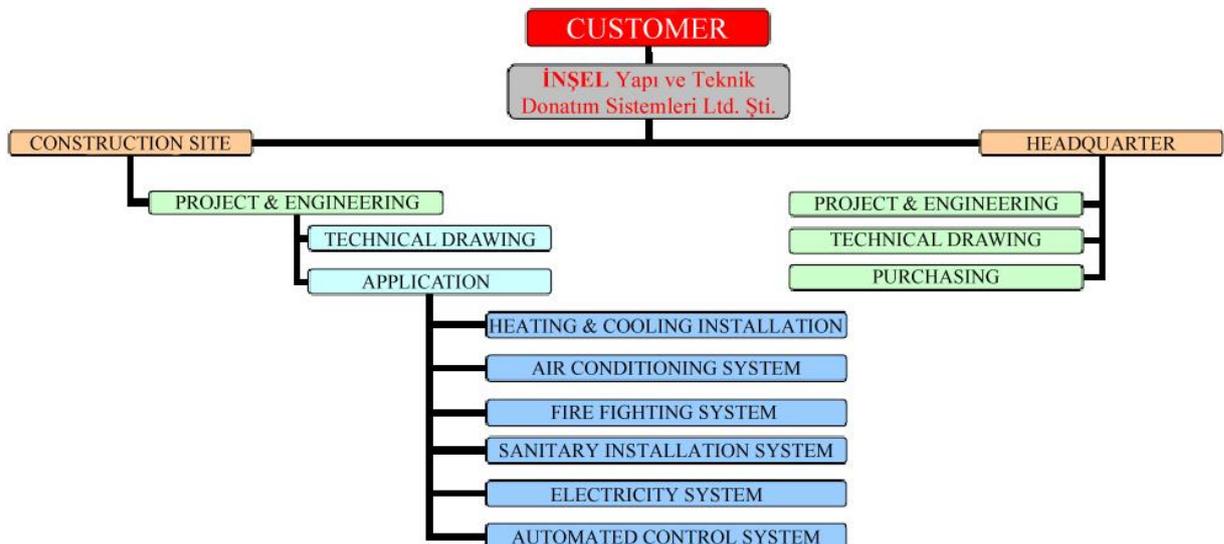
**Construction:** Wall panels, suspended ceiling systems, lighting fixtures and floorings,

**Production** Clean water piping, routing of electrical wiring,

**Control Systems:** Adaptation of displays to panels, wiring, and

**Pharmaceutical Industry:** Preparation of DQ, IQ and OQ documents. İNSEL can also contract the said works on partial basis upon request.

The implementation, coordination and contracting works of construction technical equipment systems will be performed by the permanent staff of and the experienced sub-contractors to be determined and designated by our party. İNSEL Yapi ve Teknik Donatım Sistemleri Ltd. will be the sole responsible for the timely delivery and acceptance and approval of and the warranties for the work. Particularly in respect of the projects carried out for the customers operating in the pharmaceutical industry and the subsidiary industries thereof, any and all DQ, IQ and OQ documents related to the works performed, which are required for the accreditation process, will be delivered to you upon the work completion. The team leaders and workers other than the engineers to be employed at your work site will be the direct employees of İNSEL Ltd., who are well-experienced in the implementation of clean and sterile area project implementation.



The general project implementation strategy is described as follows.

1. Construction and technical equipment systems worksite,

A specialized and well-experienced engineer, who will be acting as the construction supervisor, as well as other engineers and technicians, who are also experienced air-conditioning, installations and cooling, will be assigned on permanent basis at your work site, and any and all necessary reports regarding the works performed will be communicated to your party on daily basis. The following units are stipulated to be made available at the worksite.

- Project management and implementation,
- Work-flow control,
- Worksite allocation and coordination,
- Work safety and healthcare service,
- Implementation control, and
- Routine CAD operations.

2. Headquarters

The specialized and well-experienced engineers and other staff members will be constantly supporting the worksite team at the headquarters. The worksite team is stipulated to be supported by the headquarters on the following matters.

- Review of the existing projects and provision of alternates projects where necessary,
- Preparation of as-built projects,
- GMP risk analysis on the Works contracted,
- Purchasing,
- Logistic support,
- CAD operations,
- Work-flow control,
- Quality control, and
- Conformity and approval.

In respect of the pharmaceutical industry and its subsidiary industries,

- Preparation of DQ, IQ and OQ documents,
- Support in the preparation of SOPs (Standard Operation Procedures) regarding the works performed upon request,

## **QUALITY POLICY**

We attach the utmost priority to the understanding of the expectations of our customers and to offer the best quality solution to address their requirements and capabilities, beyond such expectations.

We create the technical solutions as a part of the services we offer the cutting edge technological infrastructure with due consideration to the requirements to the international regulations and manuals and the humane and environmental requirements.

Acting in strict compliance with the ISO 9001 Quality Management System approach; we, including our senior management, all employees and solution partners, assume the responsibility to operate and constantly improve our system in accordance therewith.

We specifically attach importance to our human resources with a view to effectively implement our Quality Policy and constantly accomplish our goals and purposes, and ensure all our staff members to be competent, aware and well-trained.

## **APPLICABLE QUALITY ASSURANCE METHODOLOGY**

The quality assurance shall be applied as follows upon the necessary calculations during the implementation of the aforesaid project:

### **Air-conditioners**

- a. Review and submission to your party for approval by our party of the entire technical documents prepared by the manufacturer of the air-conditioner,
- b. Inspection at the manufacturer's site upon the production of the air-conditioners, and of the required certificates,
- c. Inspection once again jointly with the employer of the air-conditioners following the inspection at the manufacturer's site,
- d. Assembly of the air-conditioners as designed, and post-assembly inspection to be conducted jointly with the employer,
- e. Trial operation and supply of air to the ductwork,
- f. Replacement of preliminary filters with the permanent filters,
- g. Installation of the HEPA filters,
- h. Measurement of air flow and application of necessary settings,
- i. Measurement of air-conditioner efficiency,
- j. Conduct of pre-qualification measurements, and
- k. Conduct of qualification measurements jointly with the employer.

### **Ductwork system**

- a. Completion and submission to the employer's approval of the ducting system assembly drawings,
- b. Drawing of ductwork components,
- c. Inspection at the manufacturer's site of the ductwork components,
- d. Cleaning and covering by tin foil of the vents of the ductwork components,
- e. Inspection jointly with the customer of the ductwork components at the worksite,
- f. Assembly of the ductwork system, and
- g. Conduct of ductwork leakage tests jointly with the employer.

### **Piping system**

- a. Completion and submission to the employer's approval of the piping system assembly drawings,
- b. Purchase of certified pipes from the manufacturer,
- c. Inspection jointly with the customer of the pipes at the worksite,
- d. Assembly of the piping system, and
- e. Conduct of piping system leakage tests jointly with the employer.

### **Other equipment**

In advance of the ordering of any and all other equipment, the certificates thereof will be checked while all such equipment will be inspected jointly with and be ensured to be approved by the employer in the field before the assembly. The other processes shall be implemented in the foregoing order with respect to the equipment to be employed.

## TECHNOLOGICAL BACKGROUND

### Data Processing Center

İNŞEL keeps close track with the advancements in the technology as a part of its operations of project implementation and planning, projection and organization activities within its structure, and currently has any technological equipment, knowledge and experience to perform and conduct any and all projects, implementations and CAD operations in-house.

Please find below Some of the Significant Software Programs We Use:

- Windows Advanced Server 2012,
- Microsoft Exchange Server,
- Ftp Server,
- Fax Server,
- Windows 7 Pro,
- Microsoft Office 365 Pro (Word, Excel, Powerpoint, Acess, Outlook),
- AutoCad,
- Microsoft Project,
- Mth, Mechanical installation calculation software
- Amr5, Measuring Instrument software
- Nova Pro, Air-conditioning software
- Swegon AB, Air-conditioning software
- GKI, Air-conditioning software
- System Air SP, Equipment selection software
- Logo, Accounting software
- Clim Calc, Equipment selection software
- TPBOP 1.68 Installation software

Please find below the breakdown of our Hardware components

- Desktop Computers: 18
- Laptop Computers: 38
- Plotters: 2
- A3 Printers: 2
- Laserjet Printers: 4
- A4 Printers: 8
- Fax: 1
- Photocopiers: 2

### **Measuring and Testing Equipment/ Instruments**

- Ductwork leakage testing equipment/ instrument,
- Air-flow measurement equipment/ instrument,
- Ductwork system air rate measurement equipment/ instrument,
- HEPA sub-filter air rate measurement equipment/ instrument,
- Indoor temperature measurement equipment/ instrument,
- Indoor humidity measurement equipment/ instrument,
- Humidity and temperature measurement equipment/ instrument,
- Surface temperature measurement equipment/ instrument,
- Pressure measurement equipment/ instrument,
- Cooling gas leakage measurement equipment/ instrument,
- Electrical power measurement equipment/ instrument,
- Lases distance measurement equipment/ instrument,
- Laser level determination measurement equipment/ instrument (specifically for the ductwork system and the suspension of the suspended ceiling systems),
- Particle measurement equipment/ instrument.

The equipment planned to be acquired within the budget for 2015 are provided as follows:

- Filtler integration measurement equipment/ instrument, and
- Aerosol production equipment.

### **Transportation Vehicles**

- 1 Pick-up Truck
- 2 Minibuses and
- 5 Automobiles.

## REPRESENTED COMPANIES

İNŞEL represents specialized brands with worldwide reputation in Turkey and employs the products thereof in the projects it implement.



Please visit the following websites of the companies for further information about our representation.

A+H	: <a href="http://www.a-und-h.de/">http://www.a-und-h.de/</a>
Arias	: <a href="http://www.arias.de/">http://www.arias.de/</a>
BDK	: <a href="http://www.bdk-online.de/">http://www.bdk-online.de/</a>
Berkshire	: <a href="http://www.berkshire.com/">http://www.berkshire.com/</a>
M+W Group	: <a href="http://www.mwgroup.net">http://www.mwgroup.net</a>
Climatech	: <a href="http://www.climatech.at/">http://www.climatech.at/</a>
Freudenberg Viledon	: <a href="http://www.viledon-filter.de/">http://www.viledon-filter.de/</a>
Leonhard Weiss	: <a href="http://www.lw-fussbodentechnik.de/">http://www.lw-fussbodentechnik.de/</a>
MCRT	: <a href="http://www.mcrt.de/">http://www.mcrt.de/</a>
Ritterwand	: <a href="http://www.ritterwand.de/">http://www.ritterwand.de/</a>
Skan	: <a href="http://www.skan.ch/">http://www.skan.ch/</a>
Weiss GWE	: <a href="http://www.gwe.de/">http://www.gwe.de/</a>
HET-Anke Filtertechnik	: <a href="http://www.het-filter.de/">http://www.het-filter.de/</a>
Letzner Pharmawasseraufbereitung	: <a href="http://www.letzner.de/">http://www.letzner.de/</a>
Mar Cor Purification	: <a href="http://www.mcpur.com/">http://www.mcpur.com/</a>
SunCombe	: <a href="http://www.suncombe.com/">http://www.suncombe.com/</a>



Germany

**BDK**

<http://www.bdk-online.de/>



BDK, which has been maintaining the Clean Room equipment production operations in Germany since 1982, specializes specifically in the laminar flow cabins and insulators.

BDK produces clean room equipment with vertical and horizontal laminar air flow, which ensure protection for

- Products,
- Products and staff, and
- Products, staff and environment.



**PRODUCTS:**

- Laminar flow cabins,
- Laminar flow worktables,
- Microbiologic safety cabins,
- Weighing and sampling cabins,
- Filter – fan units,
- Insulators for production equipment, and
- Animal experimenting cabins.



**INDUSTRIES SERVED:**

- Pharmaceutical production
- Hospitals
- Food industry
- Electronics industry
- Biotechnology
- Automotive industry



Switzerland

SKAN

<http://www.skan.ch/>



Having been established in 1968, SKAN AG is a pioneer company in the production of clean rooms equipment for the chemical and pharmaceutical industry and the insulation technology.

SKAN AG has become a major partner in the sector for the research laboratories and industry and a market leader for combining its innovationist and customized design solutions with its strong service organization.



Skan offers comprehensive clean room and impurity control. Such products offer complete solutions for pharmaceutical insulators:

- Conceptual, basic and detailed design Works,
- Implementation,
- Assemblage and start-up,
- Qualification (IQ/OQ),
- Improvement of disinfection circulation (PQ), and
- Re-qualification, servicing and maintenance.

**PRODUCTS:**

**Generally;**

- Insulators,
- Glove and insulator integrated testing system,
- H2O2 integrated disinfection process, and Transfer systems

**For Clean Rooms;**

- Insulators and glove boxes for production facilities and laboratories,
- Laminar flow units for production facilities and laboratories,
- Air traps for products, staff and disinfection,
- Particle measurement and observation systems,
- Microbiologically safe worktables,
- Fume hoods and mobile chambers, and
- Supporting products in Clean Rooms.



**INDUSTRIES SERVED:**

- Pharmaceutical production
- Hospitals
- Subsidiary industries
- Offices
- Food industry
- Electronics industry
- Biotechnology
- Semiconductor production



Germany

**FREUDENBERG – VILEDON**

<http://www.viledon-filter.de/>



Freudenberg, Viledon, which was started as a family business in Germany 156 years ago and has globally specialized in non-woven products, has entered into the industry of ventilation filters, which are applicable in any field, and has gained a significant share in the global market for its proven quality.



The filters produced by Freudenberg, Viledon, which are used in any ventilation, air-conditioning and waste air systems in every industry from heavy industries to sterile areas, ensure the reliable operation for long periods of time with low operating costs of the systems, to which they are assembled.

The product range of the company includes G3-G4 plates and bag type filters, F5-F9 fine filters, combined dust and odor filters, H11-H14 HEPA filters and U15-U17 filters.

**PRODUCTS:**

- HVAC & Clean Room Filtration,
- Surface Conditioning Technology,
- Turbine Absorption Filtration
- Dust precipitation,
- Liquid Filtration,
- Special Filtrations, and
- Cabin Air Filtration.



**INDUSTRIES SERVED:**

- Ventilation and Air-conditioning
- Electronics/ Electrotechnics
- Automotive Industry
- Environmental Protection and
- Feinmechanik / Optics



Germany

## AHLBERG + HENNRICH GMBH

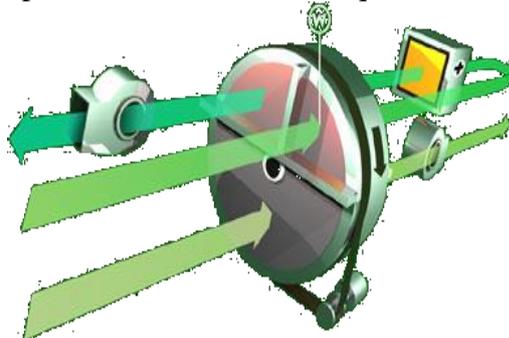
<http://www.a-und-h.de/>



AHLBERG+HENNRICH GMBH

Alberg+Henrich, established in 1993, enjoys an experience of over 20 years in the production of permanent and high production quality dehumidification equipment or central dehumidification units.

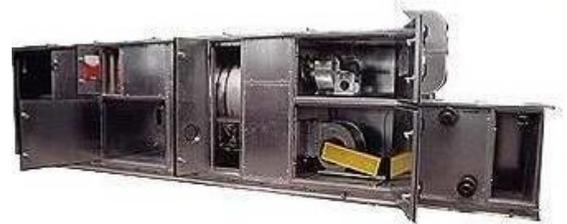
A+H GmbH, which has a modular structure with its standard product range and central units, is also capable of producing completely customized products to address the requirements and production structure of its customers.



The dehumidification equipment produced by A+H are remarked as the most effective products in the field for the combination of the high internal heat insulation (W), high load capacity and special rotors.

### PRODUCTS:

- Air Driers,
- Absorbent Systems
- Air-Conditioning Installations
- Air-conditioners,
- Air-conditioning Technical Equipment
- Driers
- Drier Substances and



Dehumidification Central for Condensation Point at -60°C.

### INDUSTRIES SERVED:



Standard Equipment

- Clean Room Technology
- Air-conditioning Systems
- Plastic Technology
- Storage
- Power Centers / Power Plants
- Hygroscopic products
- Non-condensation spots.



Germany

**WEISS GWE**  
<http://www.gwe.de/>



Weiss GWE waste capturing and generation systems create working areas with product and staff protection. The working areas (filtered and non-filtered), which are in conformity to GMP/FDA requirements, the clean rooms and clean rooms separated by air baffles all together constitute the fields of operation of Weiss GWE.

GWE improves its operations and capabilities in accordance with the market requirements and develops novel products for working area safety with a view to meet and even exceed the market needs.

The working area safety is considered to highlight the environmental protection and the human health. As a matter of fact, persons and products should essentially be protected from the gases, dusts and aerosols, that emerge during the production processes, the importance of which has been proven typically in the pharmaceutical, cosmetics and food industry as well as the electrical and optics industry that necessitate fine engineering.



Weiss GWE has made a considerable reputation in the clean room technologies industry within the last 25 years for its air directive systems such as WIBOject and WIBObarrier, which have ensured the company to specialize in the field and rendered it the market leader.

**PRODUCTS :**

- WIBOlifescience
- WIBOcare
- WIBOsystemec
- WIBOindustries
- WIBOlab
- WIBOserv



**INDUSTRIES SERVED:**

- Pharmaceutical and Its Subsidiary Industries,
- Genetic Engineering
- Biotechnology
- Cosmetics Industry
- Food Industry
- Chemical Industry
- Medical Industry And Etc.



Germany

## RITTERWAND GmbH & Co.

<http://www.ritterwand.de/>



Ritterwand GmbH & Co., which was established on some 14,000 m<sup>2</sup> space in Nufringen, Germany in 1947, currently produces walls, ceilings and profiles through a staff of 230 members. The company, which generated some € 29 million in 2002, specializes in door, wall and ceiling systems particularly for clean rooms and pharmaceutical production facilities.



Ritterwand specializes in the wall, ceiling, floor and integrated functional beam components for the semiconductor production, pharmaceutical, biotechnology industries as well as the related industries and offices, industrial sites and clean rooms.

The company also offers the following services on integrated basis through the offering of the foregoing solutions.

Consultation, Planning, Design, Engineering, Production, Electrotechnics, Logistics, Assemblage and Start-up.

### PRODUCTS:

- Cabins for production sites,
- Wall and ceiling units for clean rooms, pharmaceutical production facilities, offices and production sites,
- Special doors for clean rooms, pharmaceutical production facilities, offices and production sites, and
- Profile systems.



### INDUSTRIES SERVED:

- Cabins for production sites,
- Clean room areas
- Partitions and ceilings for the pharmaceutical industry,
- Partitions and ceilings for general production sites,
- And office areas



## SUNCOMBE

<http://www.suncombe.com/>



Suncombe Ltd. was established in 1961 with a view to offer advanced engineering services. The organization is devoted to develop hygienic processing technologies and cleaning solutions for the food, beverage and pharmaceutical industries as well as the other critical hygiene industries. The mission statement of the company consists of the employment of innovative technologies and meet the future's cleaning needs by addressing to the process requirements.



The entire set of documentation is provided for all high quality products. All tests applied contain the conformity reports in respect of the quality assurance systems.

- Standard design packs,
- Customized solutions to address the needs
- After-sales services and technical support
- On-site research, testing, installation, development, maintenance and repair

The full documentation packs include validation and training, as well.

### PRODUCTS:

- Cleaning Solutions
  - CIP Systems – On-site cleaning
  - Integrated Washing Rooms
  - Washers
  - Laser cleaning systems
- Operations
  - Turn-key Project
  - Sliding systems
  - Warehouses, stirrers and pressure tanks
- Services
  - Production and installation Systems
  - Automation
  - Consultancy



### INDUSTRIES SERVED:

- Hospitals
- Biotechnology
- Medical (Healthcare, Personal Care)
- Pharmaceutical Industry
- Food Industry (Milk, Beer, Wine)
- Cosmetics Industry
- Chemical Industry
- Petro-Chemical Industry
- Coating Industry
- Paint Industry





Germany

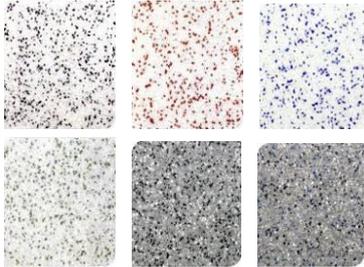
## LEONHARD WEISS

Fußbodentechnik

<http://www.lw-fussbodentechnik.de/>



The company was established as a subsidiary group in 1985 as a consequence of the 20-year experience in clean rooms flooring technologies of LEONHARD WEISS, a construction group of companies, which was established in Goppingen, Wuerttemberg, Germany in 1900.



The company initially served merely to the meat and the metal industries by offering floorings of synthetic resin. However, it currently serves also to the pharmaceutical, cosmetics and food industries by offering Pharma Terazzo floorings in compliance with the GMP and FDA requirements, relying of the years of researches.

### PRODUCTS:

- **LW Pharma Terazzo :**  
Hygienic, industrial type flooring for the pharmaceutical industry.
- **Pharma Terazzino**



### INDUSTRIES SERVED:

- Pharmaceutical industry
- Hospitals



Germany

## MCRT

<http://www.mcrt.de/>



MCRT was established in 1999 to develop novel clean room products. MCRT offers a complete set of clean room consultancy services and assists its customers at any stage from the planning to the implementation.



MCRT is capable of producing alternative solutions to address its customers' needs. Such solutions include multiple and multi-directional blow ventilated working areas and soft wall systems. The service range of the company includes consultancy, clean room training and clean room analysis and optimization.

### PRODUCTS:

- MCRT Filter-Fan Units (FFU)
- EASY Line Clean Room Systemi
- Active and passive small equipment and areas
- Laminar-Flow Working Areas
- Particle measurement
- Inspection/ Supervision
- Consultancy
- Planning



### INDUSTRIES SERVED:

- Pharmaceutical industry
- Semiconductor Industry
- Microstructure techniques
- Medical Instruments



Germany

**LETZNER**

<http://www.Letzner.de>



LETZNER Pharmawasseraufbereitung GmbH was established in 1990 to produce materials and supplies addressed to reverse osmosis (RO) facilities for the pharmaceutical industry. The company is also remarked as one of the leading companies in the german and international pure steam production facility and treatment facility industry. LETZNER facilities produce pure steam, purified water and water-for-injection (WFI) systems at the highest level of reliability.



The said systems are produced in accordance with the requirements of the latest Ph.,Eu., USP, EC-GMP ve FDA standards. The company offers sealing, purification and pure steam system quality under any operating condition.

The company offers jointless and stainless steel type 316L production equipment, tanks and piping systems particularly for the pharmaceutical industry.

**PRODUCTS:**

**Pharma / Biotech**

- One-Pass RO-System/EDI
- Double Stage RO-System
- Single Effect Still
- Multi Effect Still
- Pure Steam Generator
- Sterile DTS Heat-Exchanger
- System integrator



**INDUSTRIES SERVED:**

- Pharmaceutical industry
- Biotechnology



Germany

## ARIAS

<http://www.arias.de/>

**arias**

**Arias gmbh** was established in 1965. The dealer thereof first moved to Herdecke from Radevormwald, and then to Schwerte, being the current location. The company commenced the production of wet processing equipment in 1982. Arias gmbh achieved its success thanks to its flexibility and reliability.

The factory premises of Arias are situated in the centrum of North Rhine-Westphalia, which is not far from the highway network. The company operates through some 720 m<sup>2</sup> production space and some 120 m<sup>2</sup> office and management space.

The modern production line, the constant adaptation to the state-of-the-art standards and the long-term staff loyalty has contributed to the success of the company.



- ARIAS specializes in the heat tempered plastics.

### PRODUCTS:

- Laminar flow units
- Wet benches
- Modular clean room worktables
- Chemical supply systems
- Acidic and caustic cabins
- Fume hoods
- Condensed washers



### INDUSTRIES SERVED:



- Electronics industry
- Semiconductor Industry
- Chemical Industry
- Laboratories



Almanya

## **M+W ZANDER**

<http://www.mwgroup.net/>



M+W GROUP

M+W Group is the leading global engineering, construction and project management company in the fields of Advanced Technology Facilities, Life Science & Chemicals, Energy & Environment Technologies and High-Tech Infrastructure. With its competence to link process and automation technologies and complex facilities to integrated solutions M+W Group GmbH is the holding company with headquarters in Stuttgart, Germany. In 2010 M+W Group has a workforce of approximately 6,000 employees.

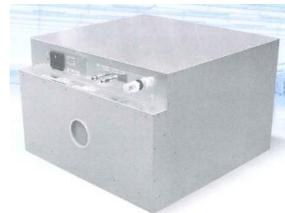
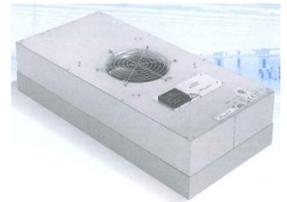
M+W Group is owned by the Austrian Stumpf Group that is globally successful in the areas of High-Tech Engineering, Smart & Renewable Energy, Real Estate and Technology Investments.



- M+W Group primarily focuses on leading companies in the fields of electronics, photovoltaic, life science, chemicals, energy, automotive, security and communication, as well as research institutes and universities.
- M+W Zander focuses on cleanroom technologies including the production of cleanroom components and technical facility systems for the electronic, pharmaceutical and food industries. The company is a global leader in the planning and realization of turnkey chip factories.
- İş güvenliği, çalışan ve müşteri memnuniyeti, çevre güvenliği ve kaliteyi en ön planda prensip edinmişlerdir.

### **PRODUCTS:**

- FFU Systems (Filter Fan Units)
  - Ultra Filter Fan Unit
  - CWIC System
  - Plenum Integrated Filter Fan Unit
- Clean Work Cabins
  - Ultra flex Cleanroom
  - Weighing Cabins
  - BIOTECH Cleanroom Cabin
- Air Showers
  - Air Shower
  - Tunnel Air Shower



### **INDUSTRIES SERVED**

- Aerospace
- Automotive
- Chemicals, Pharmaceuticals, Biotech
- Electronics, Nanotechnology
- Life Science
- Environmental Eng., Waste to Energy
- Food & Consumption
- IT Technologies
- Photovoltaic
- Offices
- Laboratories

## REFERENCES: (Short Description)

### DEPA (DEVA Holding)

#### **Medical Active Agent Production:**

Turn-key Clean Room system Class 100, 10,000 and 100,000 (A, B, C and D). In addition to the class A and B requirements, the minus pressure requirement was satisfied in the production area; furthermore it was ensured that the product is definitely not exposed to the atmosphere, and the humidity in the production area does not exceed 25 % at 22 °C. The staff and material entrance to the sterile area occurs separately and through air traps, where plus-minus pressure is adjusted. The work includes the walls, ceiling enlightenment, air-conditioning, automatic control system and electrical installation. Insel has contracted the projecting, implementation, assembly and material organization works. The project concept, the material import and the start-up was performed by the company represented by our party.

#### **Microbiology Laboratory:**

Turn-key Clean Room system Class B, C and D. Temperature: 22° C; Humidity 20 %. The work includes the walls, ceiling enlightenment, flooring, air-conditioning, automatic control system and electrical installation. Insel has contracted the projecting, the organization of all materials procured from Turkey and from abroad, assembly, start-up and maintenance works.

#### **Research Laboratory:**

160 m<sup>2</sup> turn-key Clean Room system Class B, C and D. Temperature: 22° C; Humidity 35 %. The work includes the walls, ceiling enlightenment, flooring, air-conditioning, automatic control system and electrical installation. Insel has contracted the projecting, the organization of all materials procured from Turkey and from abroad, assembly, start-up and maintenance works.

### Nobel Ilac

#### **Plantafarma Pharmaceutical Factory:**

Nobelfarma (formerly, Plantafarma), which has been undergoing a re-organization process since the acquisition thereof by Nobel Ilac, has been renovating its former production areas by departments and constructs new production areas. We have implemented air-conditioning, heating, cooling, fire alarm and fire extinguishing systems, walls, ceilings and floorings for office spaces and cephalosporin, tablet, sugarcoated pill, pomade and syrup production areas in some 26,000 m<sup>2</sup> closed space.

### Ulkar Kimya

#### **Micropellet Department:**

Class D and C; temperature: 24 C +/- 2; humidity: 30 – 60 %, automatic control, steam system, compressed air and deionized water system, pharmaterazzo flooring.

#### **Raw Material Warehouse:**

Air-conditioning, automatic control and fire alarm system.

#### **Production Area:**

Air-conditioning, heating, cooling, fire alarm and fire extinguishing systems for the 4,000 m<sup>2</sup> active agent production area.

İNSEL currently works on ongoing system construction in addition to the aforesaid works.

**The National Research Institute of Electronics and Cryptology (NRIEC)**

**Yital Project:**

A turn-key clean room system was established in this project, which is the sole microchip production site in Turkey. The project was performed in various surface areas as Class Klâs 10, 100, 1000, 10,000 and 100,000, and temperature: 21 °C +/- 0,3 K; humidity: 45 %. The work includes the walls, ceiling enlightenment, flooring, air-conditioning, automatic control system and electrical installation and fire alarm system. Insel has contracted the projecting, implementation, assembly and the organization of materials procured at home. The project concept, the material import and the start-up was performed by the company represented by our party.

**Refik Saydam Health Center Tuberculosis Research Laboratory**

Turn-key Clean Room system, Class 1,000 and 100,000. The works include microbiological safety cabins, walls, ceiling enlightenment, flooring, air-conditioning and automatic control system. The laboratory established for tuberculosis researches was constructed in accordance with the high protection class (P3) set by the WHO, and the bacterium outflow from the laboratory was prevented. Insel has contracted the projecting, implementation, assembly and the organization of materials procured at home and from abroad. The project concept and the start-up was performed by the company represented by our party.

**Tubitak (the Scientific and Technological Research Council of Turkey)**

**National Metrology Institute (UME)**

Precise Measuring and Calibration Laboratories. The work specifically includes the operation of the laboratories at 21 C ± 0.1 K constant temperature, which is technically extremely hard to be rendered. Clean Room class: up to 100,000. The work was contracted by the company represented by our party, and Insel (which was doing business as PEM by the then current date) has sub-contracted projecting, implementation, assembly and the organization of the materials procured at home. The project concept and the start-up was performed by the company represented by our party.

**Environmental Departmen (MAM-TIC)**

Turn-key Clean Room system, Class 100, 1,000 and 100,000. The work includes the walls, ceiling enlightenment, flooring, air-conditioning and automatic control system. Insel has contracted the projecting and the organization of the materials procured in Turkey as well as the implementation and assembly works. Insel has contracted the conception, projecting, implementation, assembly and the organization of materials procured at home. The procurement of the materials to be procured from abroad was ensured by the company by our party, while the project was started up by Insel.

**Kazakhstan AFF-Nobel Ilac**

The air-conditioning, heating and sanitary installation, automatic control system installation, electrical installation as well as the design, implementation of assembly and the organization of the materials to be procured at home for the 5,000 m<sup>2</sup> pharmaceutical production area project performed in Kazakhstant was contracted by Insel. The procurement of materials from abroad (Kazakhstan) and the transportation works were performed by our partner in project.

**Sabancı University**

**Electronics Laboraroty**

Clean Room system Class 1,000. The work includes ceiling and air-conditioning system. Insel has contracted the conception, projecting, implementation, assembly, the organization of materials procured at home and the start-up works. The procurement of materials to be procured from abroad (being, solely, the Air-conditioner) was performed by the company represented by our party.

**A Private Company**

A Class 10, 100, 1,000, 10,000 and 100,000 project with 21 °C +/- 0.5 K and 35 – 65 % humidity range in various areas of the 600 m<sup>2</sup> clean room, which was delivered on turn-key basis, has been performed for a customer, which prefers not to be mentioned as a reference and requires its trade name to be disclosed under prior consent. The work includes the walls, ceiling enlightenment, flooring, air-conditioning, automatic control system, electrical installation, fire alarm system, video surveillance and card access system. Insel has contracted the design, implementation, assembly, the organization of the material procurement for the materials to be procured at home and from abroad as well as the start-up and maintenance works in respect of the said project.

**Tubitak SAGE**

Precise Measuring and prototype production laboratory. The work specifically includes the operation of the laboratories at 22 C ± 0.5 K constant temperature and max. 1% humidity, which is technically extremely hard to be rendered. INSEL has contracted the design, implementation, assembly, the organization of the material procurement for the materials to be procured at home and from abroad as well as the start-up works for the 50 m<sup>2</sup> laboratory of Clean Rooms Class up to 100,000 on complete basis, and the laboratory is remarked as the unique project ever implemented in Turkey, currently.

**MESA Hospital**

Insel has performed the design, implementation, assembly, the organization of the material procurement for the materials to be procured at home and from abroad as well as the start-up works of the sterile air-conditioning systems of the operating theatre, adjacent rooms and the intensive care units, the total surface area of which is 2.000 m<sup>2</sup>, at the said hospital.

**Yeditepe Eye Hospital**

Insel has performed the design, implementation, assembly, the organization of the material procurement for the materials to be procured at home and from abroad as well as the start-up works of the sterile air-conditioning systems of the four operating theatres, adjacent rooms, the excimer laser department and the intensive care units, the total surface area of which is 800 m<sup>2</sup>, at the said hospital.

**Erzurum Aziziye Research and Application Hospital**

The equipment offered by the company represented by our party were deployed for the two operating theatres constructed at the said hospital; while the projecting and material supply were performed by Insel and the company represented by our party, and the implementation and assembly works were performed by the direct contractor of the university. The start-up work was performed by the company represented by our party.

**Abdi Ibrahim Ilac**

The 5,000 m<sup>2</sup> walkable suspended ceiling provided by Ritterwand, which is represented by our party, was deployed for the new R&D laboratory and the old laboratory sections in the said company's premises.

**Research Laboratory:**

Clean room ceiling system for the 4,800 m<sup>2</sup> Laboratory area.

**Sanovel Ilac**

The products of Weiss-GWE, which is represented by our party, were deployed for the weighing and sampling sections, and the sterilizing test insulators of SKAN, which is also represented by our party, were deployed for the microbiology laboratory of the new premises constructed in Cantakoy of the said company.

**Mustafa Nevzat**

The laminar flow units of BDK, which represented by our party, were deployed for several sterilized areas constructed in the said company.

**Biofarma**

The hygienic air-conditioning plants of Weiss Klimatechnik and Climatech, which are represented by our party, were deployed for all sterilized areas constructed in the said company.

**Arcelik (Eskisehir)**

**Sound Laboratory**

Turn-key sound laboratory. The work includes the walls, ceiling enlightenment, flooring, air-conditioning, automatic control system and electrical installation.

**Kent Gida**

The hygienic air-conditioning plants of Weiss Klimatechnik and Climatech, which are represented by our party, were deployed for all sterilized areas constructed in the said company.

We have also performed the construction technical equipment works for several other projects than those, to which we refer above. Some of such projects are briefly described as follows:

**Siemens Kartal**

Complete technical equipment of seven buildings. The work includes the air-conditioning, fire extinguishing, sanitary installation, heating, cooling and fan coil systems.

**Private KOC High School, Vehbi Koc Foundation**

Heating, cooling, ventilation and fire extinguishing systems.

**Karstadt Istanbul**

Heating, cooling and ventilation systems.

**Metro Grossmarket, Bursa**

Projecting and control services for the building technical equipment

**KocNet**

Architectural modification of offices, architectural modification of the system room, elevated flooring, bullet-proof wall construction, air-conditioning and gas-aided fire extinguishing system.

**Kühne & Nagel**

Architectural modification, entire removal/ disassembly works, suspended ceiling, wall panels, flooring, wall construction, air-conditioning, sanitary installation and heating system, electrical installation and fire alarm system works were performed and delivered on turn-key basis of some 3,000 m<sup>2</sup> area.

Furthermore, several other projects, for which the products of the companies represented by our party were deployed, are available upon request.

**Bayer**

**Weighing and Sampling rooms:**

Special cabin and air-conditioning system for the 50 m<sup>2</sup> weighing and sampling rooms.

**MEDA**

**Air research laboratory:**

Turn-key clean room system for the 50 m<sup>2</sup> air testing room.