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FOCUS

Developing our core competencies

Since inception in1994, the Microtac Group of Companies has been a key player in the market for the supply of ESD-control products, building materials and air filtration products for the cleanroom industry. We have since expanded our range of products to provide a more comprehensive solution for commercial buildings, data centres, healthcare facilities, institutions and schools, oil rigs, shipbuilding, semiconductor and electronics industries, clean facilities, other industrial outfits, private homes and recreational facilities.

Our team of specialists provides an extensive range of products ranging from floor coverings (rubber, pvc, carpets & others), steel-cementitious and aluminium die-cast access floor systems, general and customized cleanroom wall systems, internal and external wall cladding systems, cleanroom and commercial metal ceiling systems, static control systems, cleanroom equipment, air filtration systems, marine equipment and services, LED light solutions, flood sensor monitoring and the other complimentary hardware and systems.

We take pride in our ability to listen, understand and fully respond to our clients' actual requirements.

CE0

GROWTH

Strengthening our core capabilities while exploring new opportunities

We are constantly expanding our product range and services to our industrial and commercial customers in Asia Pacific and Middle East regions. The Microtac Group includes Microtac Technology, Microtac Systems and Microtac Building Products that enable us to extend our reach beyond the cleanroom environment to include interior and exterior architecture products for all industries and buildings. In the year 2009, we established a new company, Uni-Flex Technology, to provide expertise in the supply and installation of metal ceiling systems.

In Shanghai, China, we have Microtac Shanghai and in Korea, we have Yestech to provide similar services to our clients in these countries. Our associates in Malaysia, Thailand, Philippines, Indonesia, Hong Kong, India and China are active and supportive in getting our OEM-products to the respective clients. As we continue to strengthen our base in Singapore, our revenues are growing at a compounded rate of 8-10% each year in our Group. We will continue to explore and invest in new opportunities and to take new initiatives to develop and grow our business through new product developments and ventures with the support from our clients and associates.



Ceiling Systems

Wall Panel Systems

Raised Floor Systems

Floor Coverings

Marine Services

LED Lightings, Sensors

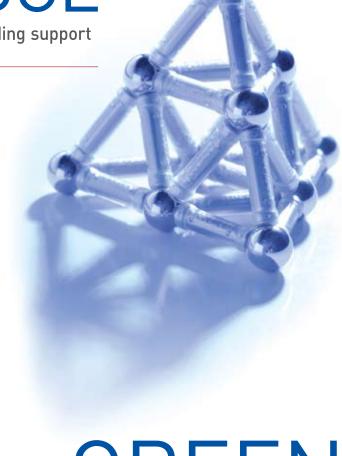
Accessories & Others

SYNERGY & KNOWLEDGE

Forming strategic relationships, providing support with expertise

At Microtac Group, we believe in forming strategic alliances with our partners and associates to expand and grow with us through a mutually beneficial and productive relationship. With the support from our clients, we provide a safe and comprehensive range of quality products, services and solutions to meet your increasingly stringent demands.

Our team of sales and project managers have years of expertise and specialization in the industry and bring along with them their wealth of experience to provide the right choice of quality products, seamless project implementation and execution to ensure the optimization of resources and time. From design, choice of materials to project execution, our specialists provide safe and on time implementation, our commitment and energy are evident in each project that we undertake.



GREEN

Building a sustainable future

As we contribute towards the building of structures that are essential for accelerating economic growth, we are also keenly aware of the need to build a sustainable future. At Microtac, we are committed to a responsible use of natural resources. Ensuring that we play a part in environmental protection has become one of the key influences in our daily decisions.

The products we offer at Microtac are made from materials that are mostly recyclable, such as aluminium, wood and steel. Flexibility and reusability of the design reduces wastage, while durability and strength of our products ensure optimized use.

In recent years we started to use more and more products that facilitate the efficient use of energy. Our Ringdale range of LED lightings, for example, displays superb energy saving ability without sacrificing light output. Environmental monitors and sensors used in building, such as our Thermokon sensors and Avtech monitoring systems ensure the optimization of energy consumption.







CEILING SYSTEMS



Ceiling Grid Assembly

Medium Duty

This system is designed for use for cleanrooms from class 100,000 to class 1,000 cleanliness levels. The system is strong enough to independently support recessed lightboxes.

Heavy Duty with Concealed Lighting

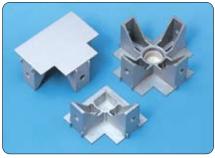
In situations where height is a constraint and tear-drop light fittings cannot be fitted, this system with concealed light system can be used. Grids with lightings are fitted with an anti-static acrylic lighting cover while grids without light fittings are fitted with an aluminium cover.

Microtac Medium & Heavy Aluminium Extruded Ceiling Grid System

Made of aluminium, Microtac Ceiling Grid Systems are suitable for use in cleanrooms due to their light weight and strength. The anodized or oven-baked powder coating provides the aesthetic look and easy maintenance.

With most of the fabrication work done beforehand in the factories, Microtac Ceiling Grid Systems are exceptionally quick and easy to install. Cutting, milling and other pre-installation procedures are made at the factory, facilitating rapid installation on site. The ease in fitting and dismantling also means that the ceiling can be modified to cater to any changes in design of the room.

Microtac Ceiling Grid Systems are highly recommended for use in general offices, computer rooms, clean rooms as well as within industrial areas. The complete system features a versatile design where it can accommodate any size and combination of filters, light fixtures and blank panels.



Joint

This system comes with cast aluminium joints and cross joints which can have holes with plugs.



06



CEILING SYSTEMS



Uni-Flex Metal Ceiling Systems

Uni-Flex Technology provides good quality and sensible design solutions. Our team of specialists and their experience help us to integrate the right system into any customized design plans. We act as an integrator to bring about the realization of the plans. The complete range of ceilings by Uni-Flex Technology meets the design, acoustic, performance and integration needs of any space. The flexibility in size, shape, colour and perforation means that Uni-Flex Technology ceilings are able to meet any application requirements.







CEILING SYSTEMS





Newmat PVC Stretch-Ceiling System

Newmat Stretch Ceiling Systems, designed and manufactured in France, have provided the architectural, design, acoustical, and lighting communities with the most creative and technically advanced ceiling system on the market.

For large expanses of seamless perfection, Newmat customfabricated membranes create the illusion of a conventional plaster or drywall ceiling. Newmat Stretch Ceiling Systems are a refreshing alternative and feature the most desirable technical aspects available in any one ceiling system.

Newmat Stretch Ceiling Systems consist of non-toxic, recyclable materials and have a Class A/1 flame spread and smoke rating. The performance under conditions such as heat, humidity, steam and chlorine fumes sets it apart from all other systems. Stretch Ceiling Systems are quick and clean to install, and they do not peel, crack or stain. Maintenance is a breeze as they can be cleaned easily.





WALL PANEL SYSTEMS

Microtac offers a series of various types of demountable partitions for indoor use that cater to different applications and requirements. The range of different materials, finishes and coatings allow great flexibility to cater to any applications and designs.

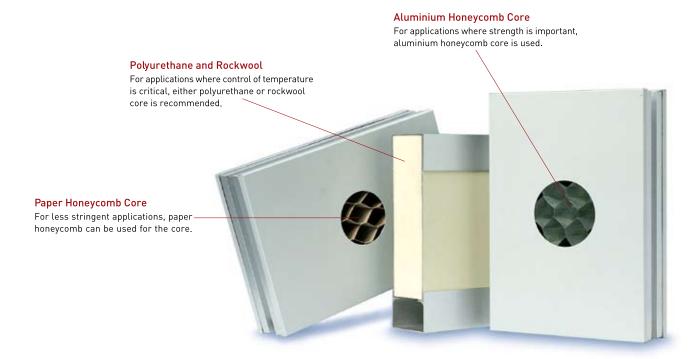
Microtac's wall panels are made with a range of materials, such as

- Aluminium honeycomb panels with aluminium or steel skin finishing
- Paper honeycomb panels with aluminium or steel skin finishing
- Laminated gypsum board with steel skin finishing
- Polyurethane or rockwool sandwich panels

The aluminium or steel skin finishings are coated with epoxy polyester resin that can either be antistatic or conductive.

Microtac partition panels are generally available in thickness of 6mm and 50mm and can be customised when necessary. They are installed with either a caulking or non-caulking system.







WALL PANEL SYSTEMS





Samwoo Steel-Skin and Aluminium Honeycomb Cleanroom Wall System

Samwoo is an established Korean manufacturer of interior products for clean rooms, various buildings and factories. The aluminium honeycomb wall systems provide excellent strength and are specifically designed for the clean room environment. Given aluminium's exceptional weight to strength ratio, the aluminium honeycomb core provides a light weight advantage while ensuring strength and durability.

The Samwoo aluminium honeycomb wall systems are constructed with either steel or aluminium finishing that provide either strength or light weighted advantages to suit different needs.

Composite Wood Wall System by MICROTAC

Microtac's range of composite wood wall systems is an attestation to our continued efforts to contribute to a green and clean world. Made of recycled wood, wooden mill ends and resin, these timber wood walls display all the aesthetic properties of natural wood without sacrificing practicability and versatility.





WALL PANEL SYSTEMS



External Wall Cladding Systems by Samwoo, Korea

Using boundless imagination and high-tech engineering, Samwoo combines millenary beauty with elegant and durable product. The features of the construction materials comes alive thanks to Samwoo's leading-edge engineering. Samwoo's complete processing technique using factory glazing guarantees work safety and utmost quality in wall cladding.



External Curtain Wall System by Samwoo, Korea

Samwoo external curtain wall systems are designed such that insulation materials are installed to intercept heat conditions between aluminium panels and remove the cause of dew condensation. They are also designed to absorb shrinkage and expansion caused by heat change so it minimizes the deterioration of external panels, thereby improving architectural image.

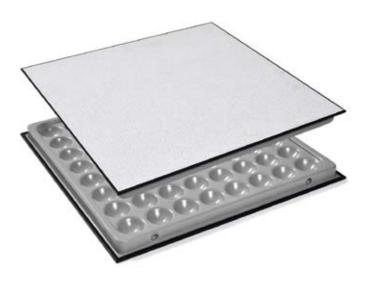




RAISED FLOOR SYSTEMS

Our team at Microtac has extensive experience and expertise in raised floor systems. We offer an extensive variety of quality raised floor systems for almost every usage. Microtac's raised floor systems allows modular floor panels to be laid quickly, with direct access to the cavity at any location. They facilitate convenient servicing of data cabling and building management systems and is versatile in adapting to any changing requirements.

Supporting the floor panels is our comprehensive series of understructure systems such as steel pedestals, rigid bolted stringer, bolted rigid grids and corner locks that cater to a diversity of load requirements.



Steel-Cementitious Panel Raised Floor System

The Microtac MFS cementitious infill panel is exceptionally strong with extra resistance against top sheet deformation. The infill with lightweight cementitious core material improves structure and acoustic performance. All the steel unitized panel construction provides load performance, including the heavyduty MFS2000 system with rigid grid understructure and MHP heavy duty pedestal assembly.

The durable epoxy power coated finish resists abrasion, making Microtac MFs panels durable and easily maintained.

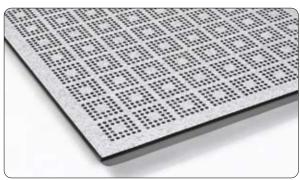
MFS panels are interchangeable with MFP perforated panels and MAS all-steel panels, offering flexibility and seamless integration. They are highly recommended for use in high traffic areas such as general offices, computer rooms as well as within industrial areas.

MFS Panel





RAISED FLOOR SYSTEMS



Designed to provide an increased smooth flow of air from the ceiling through the raised floor. Chamfered holes reduce turbulence to a minimum.



Heavy Duty Bolted Rigid Grid with Corner Lock Panel



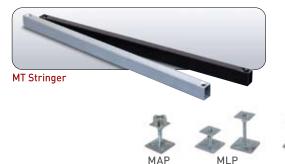


Corner Lock

Rigid Grid Bolted Stringer

Pedestals

Steel pedestals in various designs for selection in difference applications.





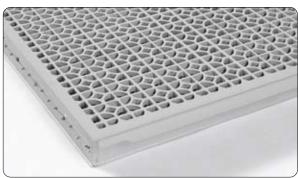




Perforated and Grating Panels

Flexible and interchangeable with our extensive range of raised floor panels, these perforated and grating panels provide high capacity airflow for computer rooms and data centres.

Microtac High-volume Grating Panels come with an option to include accessories such as dampers to control and limit the airflow through these panels.



Available in a variety of colours and coating, the specially designed grated panels minimize vibrations caused by rolling loads, and assist in maximising open-air rate.

Understructure Systems

Microtac offers an extensive range of understructure systems for various applications.

- Pedestals
 - Steel pedestals in various designs to suit different applications.
- Rigid Grid Bolted Stringer
 - Withstands high lateral forces. Suitable for installation in computer room or equipment areas.
- Heavy Duty Bolted Rigid Grid with Corner Lock Panel Mechanical bolted design that provides vibration resistant installation for industrial and shock resistant applications.
- Corner Lock

Firm, stable, rigid. Effective for general offices.



RAISED FLOOR SYSTEMS

Grating Panel

Grating panels should be installed in areas where additional air flow is required. These specially designed gratings minimize vibration caused by rolling loads and assist in maximizing open-air rate. A wide range of colour tones and coatings are available for selection.



Perforated Panel

Perforated panels are designed to provide an increased smooth flow of air from the ceiling through the raised floor. Chamfered holes reduce turbulence to a minimum.

Solid Panel

Heavy Duty Solid Panel is used in places that are subjected to heavy load. The lattice structure of these panels provides excellent weight dispersion.

Aluminium Die Cast Raised Floor System

At Microtac, we offer aluminium die cast raised floor panel system by Hae Kwang to complete our extensive range of raised floor panel products. Hae Kwang is an internationally renowned manufacturer of raised flooring systems predominately used in high-tech environments such as clean rooms.

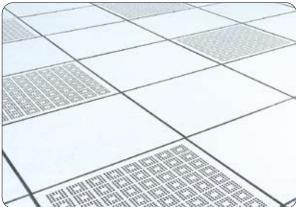
The solid panels are used in areas where extremely heavy loads are to be located. The unique lattice structure of these panels provides excellent dispersion of weight needed to support heavy machinery. The precise manufacturing of each panel allows for excellent inter-changeability. The panels are available in a variety of finishing materials such as conductive vinyl tiles, epoxy and In-Cr.



Pedestal Systems

Available in standard & heavy duty performance types. Height can be customized to suit customer's requirements. Reinforcement system made of steel can be added on, when required.





Raised Floor System installed in Data Centre

Calcium-Sulphate Panel Raised Floor System

For extreme strength to meet the most robust requirements, Microtac offers our series of calcium sulphate raised floor panels. Also known as gypsum fibre, this non-combustible material has excellent structural and physical properties which results in exceptional strength and acoustic performance.

Microtac's calcium sulphate raised floor panels are manufactured mainly with recycled materials and are virtually emission free. It is an attestation to our efforts to provide environmentally friendly products. They are versatile and can be combined with other floor panel systems to yield optimum performance and cost efficiency.



At Mircotac, we work closely with world renowned quality brands to provide you with a wide selection of choice floor coverings to cater to your unique needs.



Choice of Colour There is a wide variety of colours to choose from.

Sizes and Form

form only.

Materials of 2mm thickness are



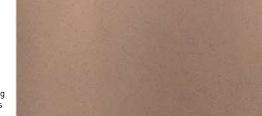
Different Thickness Depending on the application, the thickness ranges from 2mm to 22mm, the thickest of which is used for shooting



Surface Finish Available in either smooth, available in roll or tile form. Materials hammerblow or studded finish. of other thickness are available in tile



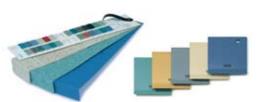




quality, nora support all those who want to achieve healthy and

High tech needs safety, and nora rubber floorings can provide safety in all aspects i.e. electrostatic conductive and electrostatic dissipative flooring, safety flooring with increased slip resistance, acoustic flooring for high sound absorption and shockabsorbing foam back, rubber flooring for special fire protection requirements as well as safety in fire toxicological terms.

aesthetic interior designs with its products and services.



Accessories Skirtings with matching colours and steptreads are available.











Finett Carpets by Germany

FINETT from Germany is one of the pioneers who developed a new technique to manufacture moderately priced and highly robust floorings. Through relentless efforts in research and development, FINETT re-invented needled carpets and provided them with a great number of unique innovative properties. Due to their resilience and versatile wear layers, these needled carpets are highly suitable for use in commercial areas.

FINETT was the first textile flooring manufacturer worldwide to be granted the BLUE ANGEL (Blauer Engel) eco label for an entire product family. By mid of 2009, the Green Label Plus certificate (LEED) was also awarded for the eco2vlies range of low-emission needled carpets.

Popular product range include: GT2000, Dessino 1, Accent, Finett 80, Finett 11 and Finett 8. There are more than 60 colours and designs to choose from.



MICROTAC TIMBERDECKS System

The Microtac TIMBERDECKS range of composite wood products is the result of a unique formula developed to provide the very best of both worlds. A long-lasting decking material that handles heat and weathering extremely well, it has the aesthetic qualities of hardwood decking with utmost performance of composite decking.

The TIMBERDECKS synthetic timber is produced in a modern, technologically-advanced manufacturing plant that uses only the finest raw materials. The base materials employed are polyethylene polymer resins and carefully ground reclaimed hardwoods. The finished extruded profiles are surface-sanded to achieve the desired appearance and slip resistant specifications.



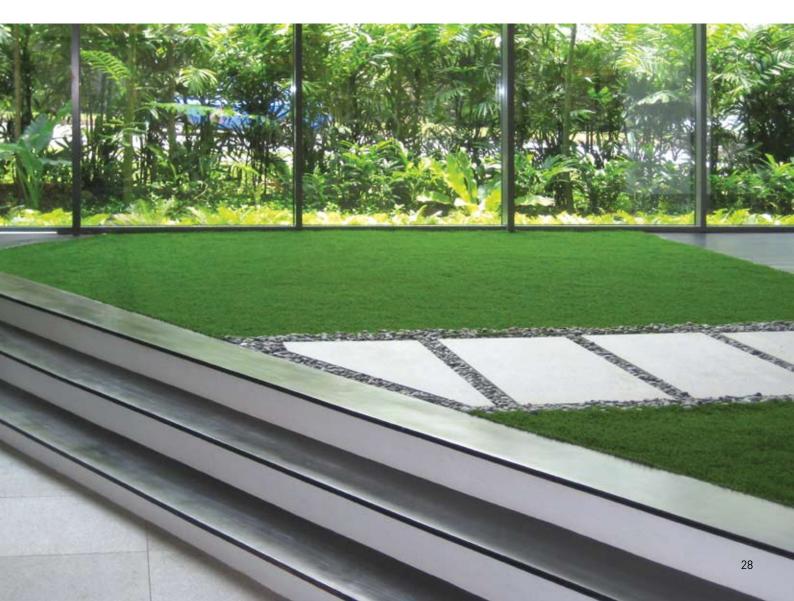




DOMO® Sports Grass

DOMO® Sports Grass is a pioneer in the sports surfacing industry. A company of Belgium origins, DOMO® Sports Grass is globally responsible for more than 50 million m² of installed artificial grass for soccer, hockey, tennis, American football, rugby, golf, skiing and multifunctional sporting applications.

Over 25 years of experience and close collaboration with local authorities, councils, schools and sports federations make DOMO® Sports Grass an expert in the development and installation of hard-wearing, easy-to-maintain artificial grass pitches. DOMO® Sports Grass guarantees the quality of every sports field. The well thought-out TQM system enables the whole creation, production and delivery process to be intensively monitored.





LED LIGHTINGS



Ringdale ActiveLED Lighting Fixtures

Ringdale's ActiveLED lighting fixtures achieve significant savings not only by significantly reducing energy costs but also reducing the day to day maintenance costs associated with changing traditional failed lighting fixtures.

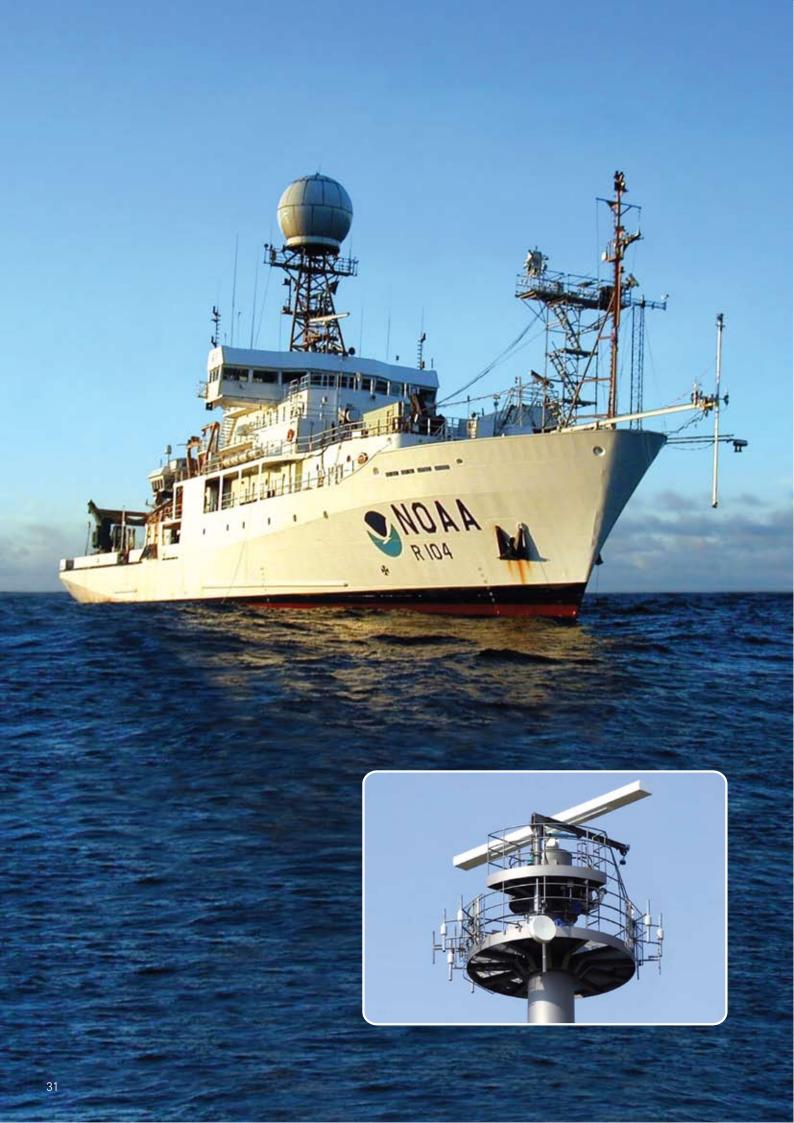
By incorporating Ringdale's patented LED technology, the lighting fixtures achieve energy savings of 50-85 percent over conventional lighting sources. By increasing control over light footprint to produce directional light and minimize light spillage and wasted energy, the intelligent controller and options enable advanced energy management capabilities, thereby providing additional savings.

Range of LED lightings

- Highbay
- Car Park Lights
- LED Flood Lights
- LED Street Lights
- LED Billboard Lights







MARINE EQUIPMENT & SERVICES







- Autopilot and Gyro Compass
- Speed Log
- GMDSS Equipment
- Radar
- Magnetic Compass Calibration
- Echo Sounder
- GPS
- Bridge Navigational Watch Alarm System (BNWAS)
- ECDIS
- VDR/SVDR
- Radio Safety Survey



ESD PRODUCTS

Simco Ionizers

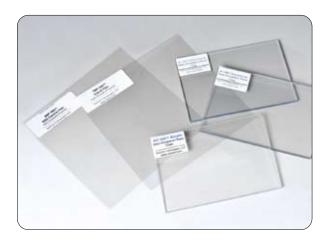
Simco-lon, the world's largest manufacturer of static control products, has been providing solutions to electrostatic issues in a wide range of industries since 1936.

Simco lonizers are used to control and monitor static charge, electrostatic discharge and static control. They are used in various markets such as semiconductor, disk drive, flat panel display, medical, pharmaceutical, aerospace and general electronic, offering solutions for a variety of diversified applications.

Simco's ionizer product line includes Static Fieldmeter, Benchtop and Overhead Blowers, Point-of-Use Blowers, Air Guns, Nozzles, and specialty ionizers for nitrogen, CDA, hi-temperature and tight confines applications.

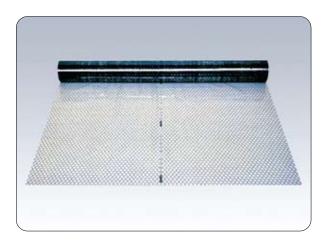


ESD PRODUCTS



Scricon Static Dissipative Plastics

Scricon is the leader in the industry for ESD control products for the semiconductor and electronics industries. The Scricon range of SD Acrylic are premium plastic sheet products that controls static electricity in many applications, including windows, doors, machine covers and enclosures as well as fabricated desiccators and cabinets. Light-weight and available in large sheet sizes, they offer excellent optical properties, chemical resistance, surface hardness and mar resistance.



Achilles Antistatic PVC-Curtains

Antistatic PVC materials by Achilles Corporation, Japan are highly effective due to the superior vinyl processing technique and stringent quality control standards.

Achilles antistatic flame retardants are specially formulated antistatic PVC films that have flame retardant properties. The series of antistatic chemical resistant materials are made from a new composite material with fluoric film layers to reduce PVC degradation, allowing them to withstand attacks by chemical agents. The Achilles range of antistatic curtains and blinds come with various properties such as scratch resistance, insect guard and anti-fungal to suit different usage.



LG Hausys VIP Conductive Tiles

LG Hausys Floors TM products are manufactured in state-of-theart factories in Korea with the highest quality raw materials and strict quality control standards.

STATICPULSE™ ESD removes static discharge and protects valuable equipment without compromising on looks and performance. It protects large data processing facilities, computerized typesetting and drafting equipment, process control equipment, communications installations, and other static sensitive equipment and instruments. With no free carbon to contaminate the clean room and low outgassing emissions, it is highly suitable for special clean room maintenance techniques in the area of semiconductor, microelectronics, optics, aerospace, pharmaceutics and biotechnology, etc.

WIRELESS SENSORS

Thermokon Sensors

Headquartered in Germany, Thermokon offers years of international know-how in technology and market experience, with its core expertise being in the field of sensors for heating systems and buildings. Its quality products help to realize "green buildings" through sustainable and energy-efficient use of existing resources in buildings. The range of products offered at Microtac includes pressure sensors, temperature sensors, Input/output modules and room operating panels.



MONITORING EQUIPMENT



RAISED FLOOR ACCESSORIES

Raised Floor Accessories

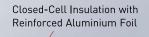
- Bulkhead Fire Cavity Barrier Beneath Raised Floor
- Closed-Cell Insulation with Reinforced Aluminium Foil
- Raised Floor Grommet
- Aluminium Air Grille

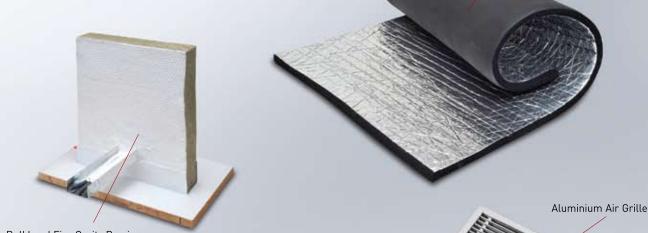


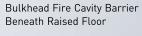


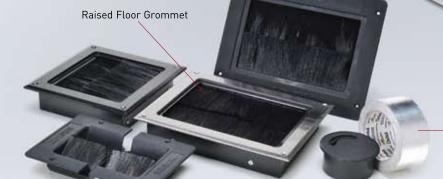
Vertical Closure (Facial)

















WALL PROTECTION SYSTEMS



CLEANROOM EQUIPMENT

Hardware and Services



AMC FILTERS & FILTER FAN UNITS (FFU)



Filters and Regeneration Services

AMC Filters

AMC (Airbrorne Moelcular Contamination) filters are important in controlling the chemical pollution of acids, bases, condensables and dopants in the air in a cleanroom environment.

Together with M+W, a leading manufacturer of AMC control products, Microtac offers a wide selection of suitable filter media for the individual requirements of different process areas. From standard activated carbon to highly efficient fibrous ion-exchange materials for removal of acidic and caustic contaminants, they are applicable for use in make-up and recirculation air systems as well as tool and process protection filters.

Filter Fan Units (FFU)

M+W Filter Fan Units are high technology and cost-effective alternative for operating cleanrooms. They are easy to install, highly flexible, low noise, low running cost and can be customized to suit any cleanroom classes. The proprietary LON-interface and software controls, monitors and optimizes the operation of the FFUs in cleanrooms.



Modular, Stackable Filter System



Yokogawa (Microtac Raised Floor System)



Medtronic Singapore Operations Pte Ltd (Aluminum Honeycomb Panel)



Neste Oil Building (Microtac Raised Floor System)



JDD at Jurong (Microtac Raised Floor System)



GALLERY



Microtac Raised Floor System for Data Centre



Medtronic Singapore Operations Pte Ltd (Aluminum Honeycomb Panel)



Microtac Raised Floor System installed in Server Room



Microtac Raised Floor System installed in Battery & UPS Room



Medtronic Singapore Operations Pte Ltd (Aluminum Honeycomb Panel)



Microtac Raised Floor System installed in Control Room



Corridor with Ram



ArtScience Museum (Microtac Raised Floor System)



TATA Communications (Microtac Raised Floor System)



Tokio Marine Centre (Microtac Raised Floor System)



GALLERY



Microtac Raised Floor installed General Office



Microtac Raised Floor installed in Server Room



Microtac Raised Floor installed in Auditorium



Microtac Raised Floor installed in General Office



Microtac Raised Floor installed in Lecture Room



Microtac Raised Floor installed in General Office





GALLERY



NUH (External Wall Cladding)



NUH (Uni-Flex Metal Ceiling System)

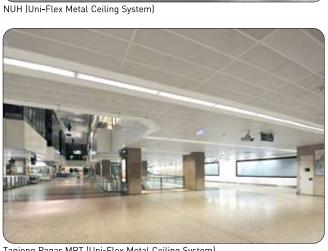


Tanjong Pagar MRT (Uni-Flex Metal Ceiling System)



NUH (External Wall Cladding)





Tanjong Pagar MRT (Uni-Flex Metal Ceiling System)



Orchard MRT (Uni-Flex Metal Ceiling System)



Orchard MRT (Uni-Flex Metal Ceiling System)



Medtronic Singapore Operations Pte Ltd (Metal Ceiling System)



Restroom at ION (Uni-Flex Metal Ceiling System)



NUH (Uni-Flex Metal Ceiling System)



Bosch, China (Finet Carpet)



NORA Rubber Floor Covering



47 Timber Decking installed in Private Residence



Artificial Turfing installed at Apollo Centre





MICROTAC GROUP OF COMPANIES

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MICROTAC TECHNOLOGY PTE LTD

MICROTAC SYSTEMS PTE LTD

MICROTAC BUILDING PRODUCTS PTE LTD

UNI-FLEX TECHNOLOGY PTE LTD