



SPECIAL APPLICATIONS GUIDELINE



OUR COMPANY

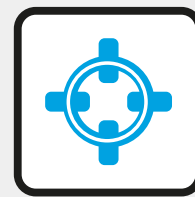
Since 1998, **Polar Air has been dedicated to developing and delivering customer-oriented, effective, and sustainable indoor climate solutions worldwide.** With three strategically located offices in Boston, Murcia, and Hong Kong, we have a global reach to serve your needs.

As part of the Polar Global group, Polar Air aligns with Polar Global's vision of making every indoor space ideal for the well-being of all, while contributing to environmental sustainability. Our mission prioritizes energy savings and environmental responsibility, utilizing innovative and intelligent approaches to help our clients achieve the perfect indoor climate.



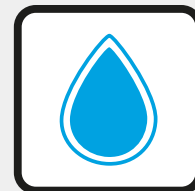
+25
YEARS
EXPERIENCE

100%
CUSTOMER-ORIENTED
APPROACH



+27
COUNTRIES
WORLDWIDE

+1800
PRODUCT
CONFIGURATIONS



EXPERTS IN SERVICING PROFESSIONALS

Experience the Polar Air difference. We are not just providers but dedicated partners in designing the perfect indoor climate for your project needs. With over 25 years of experience, we have become experts in working together with **consulting engineers, architects, installers, and manufacturers.**

Our services include:

- **Product Consultation and Needs Assessment**, which involves working closely with clients to comprehensively assess their unique requirements.
- **Product System Design and Engineering Consultancy**, crafting tailored product system designs that precisely match client specifications, coupled with expert technical support and responses to client inquiries about our product offerings.

Furthermore, we also provide other services such as:

- **Training and Education**
- **Technical Support**
- **Budget Estimation**
- **Spare Part Supply**
- **Logistics Consultation**
- **Warranty Support**
- **Financing Options**
- **Extended Warranty Options**

WHY POLAR AIR?

It's not just about HVAC; It's about the ultimate indoor climate experience.

When you choose Polar Air, you choose an extraordinary customer experience, with services that are second to none, a multicultural team of dedicated professionals delivering, not only an compelling product offering, but also personalized attention, and unwavering professionalism.



**ENERGY
EFFICIENCY**



**WATER-BASED
HVAC SYSTEMS**



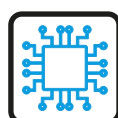
**TOP-LEVEL
CUSTOMER SERVICE**



**AESTHETIC
EXCELLENCE**



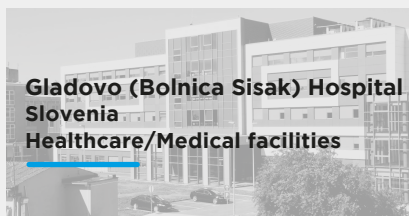
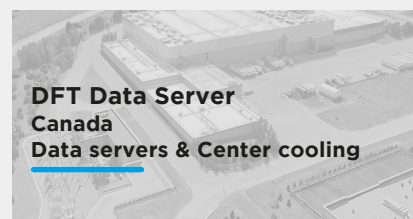
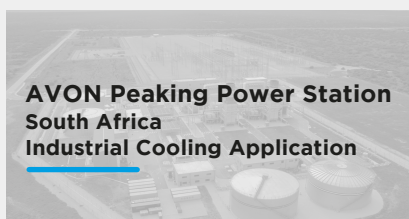
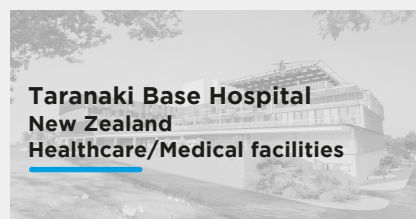
**COMPREHENSIVE
PRODUCT RANGE**



**USER-FRIENDLY
CONTROLS**

OVER 500 SUCCESSFUL PROJECTS

All the information presented in this document is based on our extensive experience in past projects. **We have successfully installed over 500 projects, and we specialize in the development of Indoor Climate Solutions that are tailored to diverse applications.** Although our expertise covers a broad spectrum, we will focus on three kinds of applications: data centers, Industrial and Medical/Health care applications.



DATA CENTER COOLING SYSTEMS



NAVIGATING CHALLENGES

HIGH HEAT LOADS

Data centers generate significant heat from servers, networking equipment, and other hardware, leading to thermal management challenges.

UNIFORM COOLING

Ensuring consistent temperatures throughout the data center is critical to prevent equipment overheating and optimize performance.

ENERGY EFFICIENCY

Traditional cooling methods can be energy-intensive, resulting in high operating costs and environmental impact.

SPACE CONSTRAINTS

Data centers often have limited space, requiring compact and efficient cooling solutions to maximize available floor area.

WHY POLAR AIR?

WE DEVELOPED A VERTICAL AIR HANDLING UNIT FAN COIL WITH A DOWNFLOW ARRANGEMENT FOR UNDERFLOOR AIR DISTRIBUTION.

WHAT ARE THE BENEFITS?

1

OPTIMIZED AIRFLOW DISTRIBUTION

Polar Air VAHU downflow arrangement, via in-floor grilles, maximizes cooling effectiveness.

2

SMART DESIGN

Polar Air fan coils' compact footprint efficiently uses underfloor space, freeing floor area for data centers.

3

ENHANCED RELIABILITY

Polar Air fan coils are engineered for durability and reliability, maintaining uninterrupted cooling in data centers.

4

HIGH EFFICIENCY

A hydronic system combining Polar Air fan coils and the VAHU reduces costs and environmental impact, thanks to minimal energy consumption.

5

EASY INTEGRATION

Polar Air fan coils seamlessly integrate with the chiller system, offering hassle-free installation and compatibility with existing data center infrastructure.

HYDRONIC SYSTEMS: A SMART CHOICE

**ENHANCED EFFICIENCY****PRECISE TEMPERATURE CONTROL****REDUCED ENERGY CONSUMPTION****FLEXIBILITY****IMPROVED AIR QUALITY**

CONCLUSION

The Polar Air VAHU fan coil, in conjunction with a hydronic system, with a downflow arrangement for underfloor air distribution, offers an optimal solution for cooling data centers. By addressing the challenges of data center cooling with superior efficiency, reliability, and space-saving design, Polar Air fan coils ensure optimal performance and longevity of critical IT equipment while minimizing operational costs and environmental footprint.





INDUSTRIAL COOLING APPLICATIONS

NAVIGATING CHALLENGES

HIGH HEAT LOADS

Industrial facilities often generate significant heat from manufacturing processes and equipment operations, leading to temperature management.

AIR QUALITY CONCERNS

Maintaining optimal humidity levels and reducing airborne contaminants is critical for product quality, and employee comfort in industrial environments.

ENERGY EFFICIENCY

Industrial operations require efficient cooling solutions to minimize energy consumption and operating costs while meeting production demands.

DURABILITY AND RELIABILITY

Industrial environments demand HVAC systems that can withstand harsh conditions and provide reliable operation under heavy usage.

WHY POLAR AIR?

WE DEVELOPED A RANGE OF FAN COILS THAT HAVE THE BEST-IN-CLASS LATENT COOLING AND DEHUMIDIFICATION PERFORMANCES.

WHAT ARE THE BENEFITS?

LATENT COOLING CAPACITY

- 1 Polar Air fan coils are equipped with best-in-class latent cooling capacity, effectively reducing moisture levels in industrial spaces.

DEHUMIDIFICATION CAPABILITIES

- 2 Polar Air fan coils feature advanced dehumidification capabilities programmed into the controller, optimizing product quality and workers comfort.

HYDRONIC SYSTEMS: A SMART CHOICE



PRECISE TEMPERATURE CONTROL



HUMIDITY MANAGEMENT



ENERGY EFFICIENCY



DURABILITY AND RELIABILITY



FLEXIBILITY IN DESIGN



CUSTOMIZABLE OPTIONS

- 3 Polar Air fan coils offer customizable options for the unique requirements of industrial applications, including various sizes, configurations, and accessory compatibility.

DURABILITY AND RELIABILITY

- 4 Polar Air fan coils are built to withstand the demanding conditions of industrial environments, providing reliable performance and longevity even under heavy usage.

ENERGY EFFICIENCY

- 5 Polar Air fan coils deliver energy-efficient cooling solutions, helping industrial facilities reduce operating costs and environmental impact while maintaining productivity and comfort.

CONCLUSION

Polar Air fan coils, known for their best-in-class latent cooling capacity and dehumidification capabilities, provide an ideal solution for industrial applications seeking precise temperature and humidity control. By tackling the challenges of industrial cooling with energy-efficient, durable, and customizable solutions, Polar Air fan coils ensure optimal performance, product quality, and worker comfort in industrial environments.

MEDICAL/HEALTHCARE CENTERS



NAVIGATING CHALLENGES

INFECTION CONTROL

Medical centers require stringent measures to control airborne pathogens and maintain high indoor air quality to protect patients and staff.

TEMPERATURE AND HUMIDITY CONTROL

Maintaining optimal temperature and humidity levels is crucial for patient comfort, recovery, and the preservation of medical equipment.

ENERGY EFFICIENCY

Medical centers face pressure to balance energy consumption, regulatory compliance, and maintaining patients' comfort.

FLEXIBILITY AND ADAPTABILITY

Medical facilities need HVAC systems that can adapt to changing occupancy levels, specialized spaces, and evolving healthcare needs.

WHY POLAR AIR?

WE DEVELOPED A COMPLETE RANGE OF ACCESSORIES SPECIFICALLY DESIGNED TO ADDRESS CHALLENGES FACED BY TRADITIONAL HVAC SYSTEMS IN HEALTHCARE SETTINGS.

WHAT ARE THE BENEFITS?

BIPOLAR IONIZATION SYSTEMS

- 1 Polar Air fan coils can integrate bipolar ionization systems to neutralize odors, kill bacteria and viruses, and improve indoor air quality, creating a healthier environment for patients and staff.

HIGH EFFICIENCY FILTERS

- 2 Polar Air fan coils can be equipped with high-efficiency filters to capture airborne contaminants, including bacteria, viruses, and allergens, improving indoor air quality and infection control.

UVC LIGHTS

- 3 Polar Air fan coils can incorporate UVC lights to disinfect the air and prevent the spread of airborne pathogens, enhancing infection control measures in medical settings.

HYDRONIC SYSTEMS: A SMART CHOICE



PRECISION CONTROL



ENERGY EFFICIENCY



QUIET OPERATION



FLEXIBILITY AND ZONING

CONCLUSION

The Polar Air fan coils integrated with high-efficiency filters, UVC lights, and bipolar ionization systems, are designed to address the challenges of medical environments, to improve indoor air quality, infection control, and patient comfort. They create a healthier, safer, and more comfortable atmosphere for patients, staff, and visitors while minimizing energy consumption and operating costs.





OR WITH ANY OTHER APPLICATION!

NAVIGATING CHALLENGES

INEFFICIENT PERFORMANCE

Traditional HVAC systems struggle to maintain consistent temperatures and can be energy-intensive, leading to increased utility costs and environmental impact.

LIMITED FLEXIBILITY

Conventional HVAC setups often lack the agility to adapt to changing environmental conditions or occupancy levels.

POOR AIR QUALITY

Standard systems may not adequately filter or circulate air, resulting in stagnant or polluted indoor environments.

MAINTENANCE CHALLENGES

Complex HVAC setups require frequent maintenance and repairs, leading to downtime and expenses.

WHY POLAR AIR?

WE PRIDE OURSELVES ON BEING MORE THAN JUST A SUPPLIER; WE'RE YOUR PARTNER. IT'S NOT JUST HVAC SOLUTIONS, IT'S ABOUT THE EXPERIENCE OF CREATING IDEAL INDOOR CLIMATES.

WHAT ARE THE BENEFITS?

1 INNOVATIVE TECHNOLOGY

Polar Air integrates cutting-edge features such as intelligent controls, variable speed fans, and energy-efficient accessories, maximizing performance while minimizing energy consumption.



HYDRONIC SYSTEMS: A SMART CHOICE



PRECISE TEMPERATURE CONTROL



FLEXIBILITY AND ZONING



ENHANCED AIR QUALITY



SIMPLIFIED MAINTENANCE

2 SUPERIOR RELIABILITY

With a reputation for durability and longevity, our fan coil units are engineered for long-term performance, backed by extensive warranties and responsive customer support.

3 CUSTOMIZABLE SOLUTIONS

We offer a range of fan coil units tailored to various building sizes and configurations, providing scalable solutions for diverse applications.

4 SEAMLESS INTEGRATION

Our fan coil units seamlessly integrate with existing HVAC infrastructure or can be deployed as standalone systems, ensuring compatibility and ease of installation.

CONCLUSION

Polar Air has a proven track record, delivering reliable and cost-effective HVAC solutions. Trusted by customers worldwide for superior comfort and efficiency, our 25 years of experience enable us to develop Indoor Climate Solutions tailored to diverse applications.

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