



*Weather with you*

**PRODUCT  
OVERVIEW**



*KLAS Air Conditioning Systems provide you with sustainable comfort and energy savings through ultimate quality products with innovative designs and integrated solutions.*

KLAS (Heating and Air Conditioning Industries A.S.) was established in 2003 in Turkey and has been in operation since then in Atatürk Industrial Zone, in Çiğli, İzmir, Turkey.

KLAS currently manufactures the following units under its registered brand KLS for its domestic sales team, as well as for several large domestic and multinational OEM customers.

- Air Handling Units
- Hygienic Package Air Handling Units
- Pool Dehumidification Units
- Fan-Coil Units
- Rooftop Package Units
- Air Cooled Chillers
- Unit Heaters
- Heat Recovery Fresh Air Units
- Heat Pump Heat Recovery Units

When required, all these products are supplied with factory fitted control systems.

KLAS's 13,500 sqm factory, home for our 150 employees, and production is in full compliance with the following standards

Quality Management : ISO 9001:2015

Customer Satisfaction : ISO 10002:2018

Environmental Management : ISO 14001:2015

Health and Safety : ISO 45001:2018

Quality and performance of our products are guaranteed under CE, TSEK, EAC, Eurovent, DIN EN 1946 Part 4, VDI 6022-1, VDI 6022-3, EN 1886, VDI-2089 norms and standards.

Unlike competition in the same business segment, KLAS has immense manufacturing and metal processing capabilities resulting from its unique and advanced cutting, bending and punching machinery park.

KLAS values are built around customer satisfaction. Therefore, we never stop investing into customer friendly tools such as web based product rating, selection software and mobile apps which enable our customers to stay up to date with product specifications, order status and most of all reaching out to us at any time for all your needs.



## Air Handling Units

KLAS offers full range of Air Handling Units covering a wide range of applications and requirements. KSA range is available in **20 sizes** up to **125.000 m³/h**.

KLAS also provides Hygienic Air Handling Units which are specially designed for applications for sterilized applications such as hospitals, clean rooms, testing laboratories, pharmaceutical & chemical plants and food & beverage industries.

### Technical Features

- **Configuration:** Inline, Double Deck or Side by Side
- **Panels / Insulation:** 60 mm Double Skin Sandwich Panels / Rockwool or PU Insulation
- **Profile:** Steel or Aluminum, Thermal break profiles available on request
- **Sheet Material:** Pre-painted / Powder Coated Galvanized steel or Stainless Steel
- **Gaskets:** EPDM gaskets between panels and profiles
- **Dampers:** Airfoil shaped aluminum dampers
- **Fan/Motor:** Centrifugal or EC motor-fan combination / High efficiency IE-3 or IE-4 motors
- **Coils:** Cu/Al
- **Heat Recovery:** Plate, Rotary, Heat Pipe and Run Around
- **Humidification:** Steam, Water Spray or Atomizing
- **Filters:** Coarse filters (G class), fine filters (F Classes) and Hepa Filters
- **ATEX Certification** on demand



## Pool Dehumidification Units

KLAS HNA series Pool Dehumidification systems are designed for indoor swimming pools and places where dehumidification is required.

They are available in 15 sizes for dehumidification capacities up to 212 kg/h.

### Technical Features

- **Configuration:** Double Deck
- **Panels / Insulation:** Double Skin Sandwich Panels
- **Profile:** Electrostatic Powder Coated AL
- **Inner Sheet Material:** Electrostatic Epoxy Painted GI
- **Outer Sheet Material:** Coated Galvanized steel or Stainless Steel
- **Dampers:** Airfoil Shaped Aluminum Damper Blades
- **Fan/Motor:** VFD driven Plug fan or EC motor-fan combination
- **Coils (Evaporator & Condenser):** DX – Copper Pipes / Epoxy Coated Aluminum Fins
- **Auxiliary Heat:** Electrical
- **Compressors:** Scroll Hermetic
- **Control And Power:** On-Board Microprocessor controlled panel and Power board
- **Energy Saving:** Heat Pipe HRU and Free cooling
- **Options:** Remote controller, Manometer, Flexible connections



## SMYRNA Fan Coil Units

SMYRNA Fan Coils are a complete line of fan coil units to meet most air conditioning requirements. Each series are designed for low noise at 3-speed and available in varied configurations with many options and accessories.

### Low Pressure Concealed

2 pipe or 4 pipe systems in 13 sizes

### High Pressure Concealed

2 pipe or 4 pipe systems in 5 sizes

### Technical Features

- **Structure:** Galvanized steel structure
- **Fan/Motor:** Galvanized radial fans with high efficient super silent motor
- **Filter:** Cleanable/Washable filters accessible from each side
- **Electrical Box:** Waterproof terminal box
- **Coils:** High Efficient Copper Pipes/ Aluminum fins
- **Drain Pan:** Epoxy coated galvanized steel with special insulation
- **Drain Pipe:** Thread
- **Options:** Room Thermostats, 2-3 way valves







## EPHESUS Rooftop Package Units

EPHESUS series rooftops are built specifically for outdoor installations in Heatpump, Gas Heat, Cool only Heat Recovery and in combination of these configurations. The units are equipped with high efficient scroll compressors and charged with ecofriendly R410a refrigerant. Each and every unit is run and tested at the factory before dispatch for making sure swift start up at job sites.

EPHESUS series are available in wide capacity, ranging from 20 KW to 235 KW in 20 different models.

### Technical Features

- **Panels / Insulation:** Double Skin Panels with Thermal Insulation
- **Sheet Material:** Coated Galvanized steel
- **Dampers:** Airfoil shaped Aluminum dampers
- **Fan/Motor:** VFD driven Plug fan or EC motor-fan combination
- **Indoor Coils:** DX – Copper Pipes / Aluminum Fins
- **Outdoor Coils:** High Efficient Microchannel Condensers
- **Refrigerant:** R410a, R407c
- **Additional Heater:** Gas-Fired / Electrical / Hot water coil
- **Power And Control:** On-Board Microprocessor Controlled Panel
- **Roof Curbs:** Pre-Fabricated
- **Condenser Fans:** Axial or centrifugal
- **Touch Panel:** Optional



## TROIA Air Cooled Chillers

TROIA Air Cooled Scroll and Screw Chillers are aiming at highest energy efficiency levels. The units are assembled, leak tested, evacuated, wired and fully charged with environmentally friendly refrigerants. Every unit is functionally tested before leaving the factory.

### Technical Features

- **Capacity range:** From 15 KW to 1,000 kW
- **Casing/Structure:** Coated galvanized steel structure
- **Refrigerant:** Eco Friendly R-410a or R134a
- **Compressor:** High Efficiency Scroll or Screw Compressors
- **Refrigerant Control:** Electronic Expansion Valve
- **Condenser Coils:** High Efficiency microchannel condensers or Cu/Al alternative
- **Control Panel:** On-board Advanced Microprocessor control system
- **Evaporator:** Plate Heat Exchangers or Shell and Tube Evaporators
- **Condenser fans:** High Efficiency Axial fans
- **Noise:** Unique Low Noise Design



## Industrial Unit Heaters

KLAS Unit Heaters are manufactured on high-quality materials for aggressive ambient conditions in hangars, car parks, factory buildings, large halls and etc. 2 configurations are available with many options and accessories.

- **KDA:** Unit heater with radial fan  
13 sizes, 5.0-50 kW capacity range
- **KTA:** Unit heater with axial fan  
12 sizes, 3.5-45 kW capacity range

### Technical Features

- **Casing:** Powder Coated mild steel
- **Fan:** Axial or centrifugal
- **Heating Coil:** Copper tubes and aluminum fins
- **Air Damper:** Powder Coated mild steel
- **Option:** Steam Coil – Steel Tubes & Aluminum Fins



## Heat Recovery Fresh Air Units

KLAS KVA Heat Recovery units are used in commercial applications where fresh air is to be treated before supply. Fresh outside air is passed through a heat exchanger and is heated by the exhaust air from the conditioned space passing through the same heat exchanger, without mixing the two air streams with each other. They are used in locations like commercial centers, offices, homes. KVA series are available in 6 sizes within the capacity range 1,000-5,000 m<sup>3</sup>/h.

### Technical Features

- **Casing:** Powder Coated Galvanized Steel with SS drain pan
- **Fan/Motor:** Direct driven 3 speed high efficiency fan
- **Heat Exchanger:** Plate Type
- **Filter:** G4 class
- **Options:** Mounted speed selector switch, thermostatic control panel, electric heater, sound attenuator

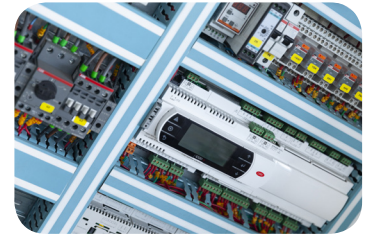


## PERGAMON Heat Pump Heat Recovery Units

PERGAMON Heat Pump Heat Recovery Unit is a new type of heat recovery unit evolved from our KVA series to maximize energy saving and meet fresh air requirements in indoor spaces such as office, store, home. Using a heat pump system together with the plate heat exchanger, fresh air is conditioned and delivered to indoor area for controlling the room temperature. This way, part of additional heat load on air conditioning system is eliminated. PERGAMON units function both heating and cooling modes. They are available in 7 sizes within the capacity range 3.5 KW to 19.8 KW and air flows up to 4,000 m<sup>3</sup>/h.

### Technical Features

- **Power Supply:** 220V-240V/50Hz/1-
- **Casing:** GI or Electrostatic Power Painted with SS Drain Pan
- **Heat Exchanger:** Plate Type (Washable)
- **Filter:** G Class (Replaceable)
- **Coil:** Al/Cu
- **Compressor:** Rotary
- **Fan/Motor:** EC or AC Direct Driven Fans
- **Refrigerant:** R410a
- **Control:** Plug and Play Integrated Control System
- **Options:** Only Cooling Mode Unit, Electrical Heater



## Factory Packed Controls

As well as top of the line air conditioning products, KLAS provides factory fitted controls with all of its products as and when required. These controls systems are packed with top of the line and world class components and in-house developed software to ensure seamless control, efficiency and reliability of the products and comfort of the conditioned spaces.

### Factory Packed Controls include

- MCC, DDC Panels
- Differential pressure sensors and switches
- Temperature, Humidity, Air quality sensors, Thermostats at various specs
- Icing Sensors
- Valve packages
- Energy meters
- Frequency Inverter drives
- Isolation and Emergency Switches
- Custom IP Panels
- Various cable isolation levels
- DX Boxes for VRF Applications
- Lighting systems and UV lamps
- Ex proof systems
- BMS Communication through
- Modbus RTU, BACnet MSTP, BACnet IP, LonWorks CEA 709, LonWorks IP, KNX, Mp-Bus, M-Bus, W-LAN, SNMP protocols
- BTL Certification for BACnet Controls
- SCADA and Graphics presentations thru Webservers
- Email servers
- Operation in multi languages



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