

# Utility Distribution System



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#### The Utility Distribution System

The Utility Distribution System (UDS) is designed to provide all required services (gas, electrical, hot and cold water, steam, condensate return, compressed air and chilled water) to the cooking equipment in an attractive, pre-engineered unit. Designed for today's modern kitchen with the operator's needs in mind, the UDS provides flexibility, expandability, safety, cleanliness, and convenience that no kitchen should be without. The UDS is available in a variety of models and styles including island, wall, and ceiling mounted configurations.

#### Why a Utility Distribution System?

Cadexair has been a leader in the kitchen ventilation industry for over 20 years. With the Cadexair USD, you will receive all of the services that have made Cadexair the leader in the industry, such as: engineering, sales support, quality fabrication, jobsite coordination and after sale service and maintenance programs.



**Typical UB Series Island Configuration** 

#### What The Utility Distribution System Can Do For You?

The Cadexair UDS, in island mount or wall mount configuration, offers many advantages over the contractor built wall, including:

**Coordination** - Each unit is custom designed, ensuring space, function, and service compatibility with the cooking equipment line-up.

**Versatility** - All electrical and plumbing services can be easily relocated or expanded for rearrangement of the cooking equipment, or adding additional equipment to an existing line-up.

Safety - UL, ULC, NSF and CSA listed. Complies with NEC and AGA thereby assuring acceptance by local authorities.

**Easy Installation** - Single point field connection for all utilities (gas, electrical, hot and cold water, steam, condensate return, compressed air and chilled water).

**Compatibility** - Perfect fit between the exhaust hood and the risers. **Accessibility** - Lift out inspection panels allow easy access to all plumbing and electrical components in both the raceway and the risers.

**Cleanliness** - Quick disconnect fittings with flexible hoses and power cords allow the equipment to be easily moved for cleaning or maintenance.

**Tax Incentive** - The UDS is classified as an appliance and can be put on a seven year depreciation life, improving the rate of return unlike a contractor built wall.



#### **General Description**

The Utility Distribution System is available in many models to fit a variety of all applications. Each unit is engineered for the specified and installed cooking equipment. All models are available in two series, designated by the prefix "UB" or "UH". The differences between the two series are as follows:

"UB" - This series is equipped with exposed point-of-use circuit breakers and receptacles mounted on common interchangeable plates along the face of the raceway. The circuit breakers are fed from insulated busbars located in the raceway, and both the circuit breakers and receptacles are provided with moisture resistant covers. Both the breakers and electric receptacles are installed in "Easy-Move" mounting plates so that they may be easily repositioned when cooking equipment is relocated or added.

"UH" - This series features an end riser mounted breaker panel, making all breakers accessible through the riser access door. The receptacles are individually wired (hard wired) to the breakers and are mounted on movable plates. The circuit breaker panel is provided with additional capacity so that circuit breakers can be added when the cooking equipment line-up is added or modified.

All models of the CADEXAIR "UDS" can be provided with gas supply, hot and cold water, steam and condensate return when provided. All piping is labelled for identification and steam and water lines are fully insulated. Each gas connection is equipped with an AGA approved shut-off valve and flexible hose sets with quick disconnect and safety retainer cable.

The Utility Distribution System is constructed of 18 gauge (minimum) type 304 stainless steel with a #4 finish to match the finish on the exhaust hood. All units, when built in multiple sections, due to shipping and handling concerns, are factory assembled to ensure easy reassembly in the field. All field re-connections are clearly labelled.

#### Standard Features For UB and UH Series

- AGA approved flexible hoses with brass disconnect couplings, allowing gas equipment to be easily moved.
- Coiled safety restraining cable for all gas equipment to comply with ANSI Regulation 221.69.
- Main shunt trip breaker with disconnect preventing primary riser door from opening with the power on.
- Power cords with plug sets for all electrical equipment, assuring compatibility with the equipment and receptacles.
- Emergency kill switch with status light to disconnect power to all cooking equipment in an emergency.
- "Easy-Move" electric receptacles and circuit breakers, allowing easy rearrangement or addition of equipment.
- Individual circuit breaker status lights immediately indicating that a circuit breaker has tripped.
- Built-in fuel shut-off with manual reset switch for gas and/or electrical equipment to comply with NFPA-96.
- Convenience outlet with ground fault interruption (GFI) protection mounted in the primary and secondary riser.
- Exhaust hood light switch, eliminating the need for separate lighting circuit for the exhaust hood.
- All services designed for a minimum of 25% extra capacity, allowing for the addition of future equipment.
- Unit mounted terminal blocks for field connection of wiring.

#### **Optional Features for UB and UH Series**

- Ground fault protection Type 1: 120 volt single phase 5 milliamp personnel protection used with equipment with heating elements (resistive load). Type 2: 120 through 480 volt .5 to 2.5 ampere sensitivity equipment protection used with equipment with motors (inductive load) or resistive load. To meet NEC requirements all 12OV/1 phase/20 amperes are GFCI.
- Plumbing fixtures, faucets, pot fillers, steam controls, etc.
- Metering equipment to monitor gas, water, and electric consumption.
- Built-in exhaust hood/fire protection controls.
- Security-proof latches requiring the use of special tools to remove any panels.

**Utility Distribution System (UDS):** A stainless steel housing that is pre-engineered and pre-manufactured to provide all required services (gas, electrical, hot and cold water, and steam with condensate return).

#### Definitions

**Riser:** Vertical chase that houses main utility connections and controls.

Raceway: Horizontal chase that houses all the utility outlets to cooking equipment.

Busbar: Insulated copper conductor that feeds power to branch circuit breakers located in the raceway.

Point-of-Use Circuit Breaker: Circuit breakers mounted in the raceway located near the equipment it powers.

Panel Mount Circuit Breaker: Circuit breakers for the equipment mounted in the riser.

Hardwire: Individual wires that run from panel mount circuit breakers located in the riser to the receptacles located in the raceway.

**Ground Fault (Short Circuit):** Any wiring connection that touches a bare metal part which will cause electrical current to leak to ground.

**Ground Fault Circuit Interruption (GFCI):** A circuit breaker or receptacle furnished with a sensor that monitors current flow and terminates power if there is an imbalance in the circuit (short circuit). A circuit intended for the protection of personnel.

Ground Fault Protection of Equipment (GFEP): A circuit intended to provide protection of equipment from damaging line-to-ground fault currents.



#### Features

- Complies with AGA, UPC, NEC, and NEMA
- Meets the requirements of NFPA-96 and 54 and all national mechanical codes
- All stainless steel construction type 304, number 4 finish
- Can provide gas, electric, hot and cold water, steam, condensate return, compressed air and chilled water
- AGA approved flexible hoses with brass disconnects
- Main shunt trip breaker with disconnect
- Insulated busbars for optimum versatility
- Single formed channel construction for stability and uniformity
- Circuit breaker status lights for continuous monitoring
- All utilities designed for a minimum 25% extra capacity
- Built-in fuel shut-off for NFPA-96 compliance

### **Optional Equipment**

- Plumbing fixtures, pot fillers, steam controls, etc.
- Raceway supports for wall-mounted kettles
- Cook/chill housing and controls
- Security packages

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