

SPECIFICATIONS

TAG: Utility Distribution System (UDS)

PART 1- GENERAL

1.1 SUMMARY

- A. The Utility Distribution System (UDS) is designed to meet all electrical and plumbing requirements for kitchen appliances. A two compartment raceway houses the plumbing and electrical connections needed to meet specific applications.
- B. UDI: Island configuration with equipment connections on both sides.
- C. UDW: Wall mounted with equipment connections on one side only.

1.2 SUBMITTALS

- A. The manufacturer assumes no liability for the use or results of use from this document. Specifications are to be reviewed by the engineer to confirm the project's requirements and meet Federal, State, and Local codes and regulations.
- B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice.
- C. The manufacturer shall supply complete computer-generated submittal drawings, including hood section view(s) and hood plan view(s). These drawings must be available to the engineer, architect, and owner for their use in construction, operation, and maintenance.

1.3 QUALITY ASSURANCE

- A. Unit(s) shall be ETL Listed to US and Canadian Standards, ETL Sanitation Listed, AGA and MA approved.
- B. Unit(s) shall be operated, tested and set at the factory using job-site conditions for electrical and gas input. All operating and safety controls shall be tested and set at the factory.

1.4 WARRANTY

- A. All units shall be provided with the following standard warranty:
 - 1. This equipment is warranted to be free from defects in materials and workmanship, under normal use and service, for a period of 2-years from date of shipment.
- B. The manufacturer shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment. Should any part of the equipment prove to be defective in material or workmanship within the 2-year warranty period, upon examination by the manufacturer, such part will be repaired or replaced by manufacturer at no charge. The buyer shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without manufacturer's prior authorization, and all returned equipment shall be shipped by the buyer, freight prepaid to a destination determined by the manufacturer.
- C. Refer to Manufacturer's Operation, Installation, and Maintenance (OIM) Manual for detailed descriptions of what is and is not covered, and contact information for warranty claims.

PART 2- PRODUCTS

2.1 GENERAL

- A. Systems shall have two vertical risers, one on each end, with one dedicated to electrical and the other to plumbing.
- B. The horizontal distribution raceway between the risers shall be separated into electrical

and plumbing compartments and each shall be completely enclosed and water tight with removable access panels.

- C. The risers and raceway shall be constructed of 16 or 18 gauge, type 304 stainless steel, #4 finish. A circuit protected dual convenience outlet shall be provided on each riser. Service connections shall be located behind easily removable access panels.

2.2 CONSTRUCTION

- A. **Electrical Riser:** Main power connection shall be made to the main circuit breaker which has a shunt trip and is mounted in the electrical riser.
- B. **Wireway systems:** Electrical power shall be fed through a main circuit breaker to a distribution panel which contains individual branch breakers. Each appliance is fed from the individual breakers which are wired to each receptacle located along the raceway.
- C. **Plumbing Riser:** The plumbing riser shall house manual (quarter-turn) shut-off valves for each incoming main supply line located in the UDS. The plumbing manifolds shall be provided with stub-outs along the raceway for the individual plumbing connections. Each stub-out shall be equipped with a manual (quarter-turn) shut-off valve.
- D. **Expandability:** All electrical systems are designed for additional capacity for future expansion or upgrade of connected appliances.
- E. **Wireway:** Electrical distribution panel located in the riser shall be equipped with branch circuit breakers and sized for expansion.
- F. **Serviceability and Accessibility:** Lift out doors shall provide easy access to risers without moving cooking equipment, in most cases. Removable panels provided along the length of the raceway shall allow access to either plumbing or electrical compartments.
- G. **Electric Outlets and Cord Sets:** All outlets shall provide moisture resistant covers and have been sized per NEMA standards. Each is supplied with a matching cord and plug set if these are not already supplied by the equipment manufacturer. Twist-lock sets are standard in island applications. All 120V, single phase 15 and 20 amp receptacles are DCO-GFI.
- H. **Main Disconnect:** One point disconnect through a main circuit breaker equipped with a 120 VAC rated shunt trip provided in the riser.
- I. **Gas Solenoid Valve:** Electrical or Mechanical. Electrical valves shall be provided with a manual reset button and time delay relay to prevent pilot lights from going out in momentary power outages.
- J. **Shunt Trip:** Shall be provided with each main breaker.
- K. **Appliance Protection:** Each electrical outlet connection shall be protected with an individual circuit breaker.

2.3 PLUMBING CABINET

- A. The plumbing compartment shall be completely isolated from the electrical with all piping labeled.
- B. Hot and cold water and steam supply and return manifolds shall be insulated.
- C. All incoming service connections shall be provided with 1/4 shut-off valve. Each branch connection shall be provided with 1/4 shut-off valve, with color coded hoses, and located at each equipment location.
- D. Color coded quick disconnect hoses are provided for connection to equipment.
- E. Hot and cold water piping, including branch connections, shall be type "L" copper tubing. All fittings will be copper sweat soldered (95-5 type).
- F. Gas and steam piping, including branch connections, shall be threaded black iron. There shall be a drip tee on the incoming gas end. The gas manifold shall be furnished with either an electrical or mechanical gas valve which shall be field interlocked with the fire

protection system to shut off fuel sources in the event of a fire. Electrical gas valves shall be furnished with a manual gas reset button and time delay relay to prevent pilot lights from going out in momentary power outages, located in the UDS riser.

G. Gas manifolds are sized for an inlet pressure of 7" wc for natural gas or 11" wc for LP.

2.4 ELECTRICAL CABINET

- A. **Wireway Systems:** The electrical system shall consist of a main circuit breaker which feeds power to a distribution panel located in the electrical riser containing individual branch breakers.
1. Each appliance is fed from the individual breakers which are wired to each receptacle located along the raceway and shall be completely isolated from the plumbing supply manifolds.
 2. The main circuit breaker shall be equipped with a built-in 120 VAC rated shunt trip and shall be located in the electrical riser requiring a single point incoming connection. Terminal block connections shall be provided for field interconnection between the shunt trip and the fire protection system for power shut-off in the event of a fire.
 3. All outlets shall be equipped with grounding type receptacles having specific NEMA polarized configurations and located on the under side (Model UDI) or front side (Model UDW) of the raceway at each equipment location.
 4. Outlets are matched to the cord and plug sets supplied with equipment. On the Model UDI, all 120V, single phase 15 and 20 AMP receptacles are DCO-GFI. Twist lock cord and plug sets are provided for equipment supplied without cords. On the Model UDW, straight blade cord and plug sets are provided for equipment supplied without cords.

2.5 Main Utility Inputs

A. Electric:

1. Electrical Input Riser: Left, Right, or Both.
2. Voltage/Total Amperage: ****Amperage needs to be between 30 and 600.***
3. High Standard-Wireway with End Riser Breaker Panel: Yes or No

B. Gas:

1. Gas Input Riser: Left, Right, or Both.
2. Gas Type: LP or Natural
3. Gas Valve Type: Mechanical or Electrical
4. Feed: Loop or Single
5. Inlet Pressure: ****For LP Gas: Inches of wc must be between 11 an 138. For Natural Gas: Inches of wc must be between 7 an 138.***
6. Total Flow Rate: ****Total flow rate needs to be a positive integer.***
7. Pipe Size: 1.5" or 2"
8. Hoses and Quick Disconnects Factory Supplied: Yes or No
9. Has Gas Swivel: Yes or No

C. Hot Water:

1. Water Input Riser: Left, Right, or Both.
2. Water Inlet Pressure: ****Inlet pressure needs to be between 20 and 100 psi.***
3. Water Flow Rate: ****Flow rate needs to be between 1 and 20 gpm.***
4. Pipe Size: 0.75" or 1"
5. Hoses and Quick Disconnects Factory Supplied: Yes or No
6. Water Filter: Yes or No

D. Cold Water:

1. Water Input Riser: Left, Right, or Both.
2. Water Inlet Pressure: ****Inlet pressure needs to be between 20 and 100 psi.***
3. Water Flow Rate: ****Flow rate needs to be between 1 and 20 gpm.***
4. Pipe Size: 0.75" or 1"
5. Hoses and Quick Disconnects Factory Supplied: Yes or No
6. Water Filter: Yes or No

E. Steam:

1. Steam Input Riser: Left, Right, or Both.
2. Steam Inlet Pressure: ****Steam Inlet pressure needs to be between 1 and 30 psi.***
3. Water Flow Rate: ****Steam Flow rate needs to be between 10 and 2000 Lbs/Hr.***
4. Pipe Size: 1.25", 1.5", 2", 2.5", 3"

2.6 OPTIONS

- A. Neoprene Bumper Guard: Yes/No
- B. Adjustable Riser Trim Collars: Yes/No
- C. CORE/SC Firesystem Rear Drains: Yes/No
- D. Vertical End Panels: None/Right/Left/Both
- E. Fill Faucet: Yes/No

PART 3- EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions under which the system is installed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions, drawings, written specifications, manufacturer's installation manual, and all applicable building codes.