



Carroll Manufacturing

ITEM NO. _____

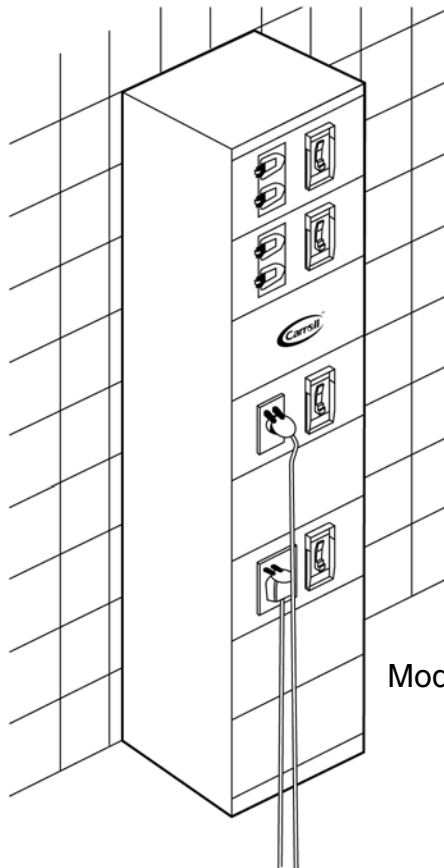
UDISCO®

Special Utility Distribution System

■ Models CR, CM, TS, UTC & BU

APPLICATION

Under-Conveyor, Ceiling-Mounted, Tray Slide-Mounted, Riser and Counter Raceways, Basic Universal Units (Systems with limited factory pre-assembly)



Model BU-R

RECEPTACLE RISER PRODUCT SPECIFICATIONS

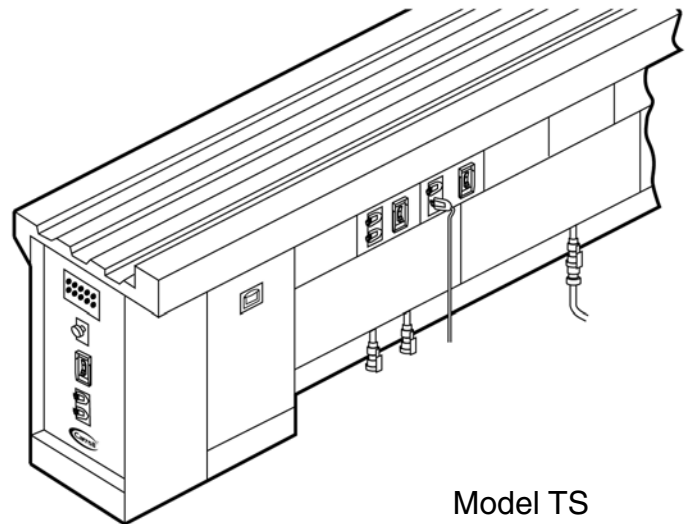
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GENERAL

Provide Carroll "UDISCO®" model _____, Utility Distribution System (UDS), of the size and configuration as indicated on project drawings, completely factory wired and piped to a single point of connection for ☐ electric - busbar system, ☐ electric - hardwire system, ☐ hot and cold water, ☐ gas, ☐ steam and condensate return, ☐ chilled water, ☐ compressed air, ☐ hydraulics, as required for the specified cooking equipment. All services shall have a minimum of 25% excess capacity to accommodate equipment changes.

CONSTRUCTION MATERIALS

The UDS shall be constructed entirely of type 304 stainless steel, number 4 finish where exposed, and not less than 18



Model TS

TRAY SLIDE-MOUNTED RACEWAY

gauge. All hardware for interconnecting multiple sections shall be furnished.

APPROVALS

The UDS shall be U.L. Listed under "Appliance Outlet Center," CSA Listed in Canada, and manufactured in accordance with the National Electrical Code (NEC), the National Electrical Manufacturers Association (NEMA), National Fire Protection Association (NFPA), bulletins 54 and 96, the Uniform Plumbing Code (UPC), the American Society of Mechanical Engineers (ASME), the National Sanitation Foundation (NSF), and the Occupational Safety and Health Administration (OSHA), using only U.L. Listed, Bureau of Mines rated, AGA certified, and CGA certified components.



RISERS

The risers shall enclose all required main shunt-trip breakers with disconnects, convenience outlets, emergency kill button, gas reset button, ventilator light switch, circuit breaker status lights, terminal block connections, main plumbing connection points, ☐ ventilator fan and wash controls, and ☐ ventilator fire protection system controls. The primary riser access door to be hinged and door-mounted components recessed or otherwise protected from damage. Door to be secured with ☐ truss head machine screws, ☐ key-operated latches.

RACEWAY

The raceway shall be constructed to isolate all electrical components from the plumbing components in accordance with the National Electrical Code, and shall be completely pre-wired and pre-plumbed to one final connection point. The raceway shall be provided with panels to access all utilities for maintenance or changes, and ☐ include full-length neoprene bumper guards. Field joints in the raceway and between the raceway and riser shall be provided with quick-disconnect snap plug-ins or terminal blocks for easy re-connection of circuit breaker and receptacle wiring.

ELECTRICAL

Specify the type of power distribution scheme - ☐ busbar system, or ☐ hard wire system.

USED IN BUS-BAR SYSTEMS ONLY:

☐ UA—CONCEALED POINT-OF-USE BRANCH CIRCUIT BREAKERS. Breakers to be located beneath the hinged peak top raceway access door. Breakers to be mounted on interchangeable plates and to be labeled to identify volts/amps/phase. The branch breakers shall be of the thermal magnetic type. A corresponding status light shall be located in the riser for each branch breaker. ☐ Provide ground fault interruption on 120 VAC/1 phase and 208 VAC/1 phase up to 30 amps.

Standardly, the branch receptacles will be located at the bottom of the raceway on interchangeable plates and shall include moisture-resistant covers.

☐ UB—EXPOSED POINT-OF-USE BRANCH CIRCUIT BREAKERS. Branch circuit breakers and receptacles shall be mounted on common interchangeable plates on the top front face of the raceway. A corresponding status light shall be located in the riser for each branch breaker. ☐ Provide ground fault interruption on 120 VAC/1 phase and 208 VAC/1 phase up to 30 amps. The breakers and receptacles shall be furnished with moisture-resistant covers. ☐ Branch breakers to be hard wired to raceway horizontal busbars.

USED IN HARD-WIRED SYSTEMS ONLY:

☐ UH—BRANCH CIRCUIT BREAKERS MOUNTED IN END RISER. All branch breakers shall be mounted in the riser on short vertical busbars, and shall be protected with a hinged access door. A corresponding status light shall be located in the riser for each breaker. The vertical busbars shall be provided with space for future additions.

The branch receptacles shall be individually wired to the branch circuit breakers and shall be standardly located at the bottom of the raceway on interchangeable plates and shall include moisture-resistant covers.

☐ UCR—NO CIRCUIT BREAKERS. EXPOSED POINT-OF-USE RECEPTACLES. Branch circuit breakers shall be provided and installed by OTHERS in a building service panel. Branch receptacles shall be standardly located on the top front face of the raceway on interchangeable plates and shall include moisture-resistant covers. Wiring between receptacles and remote circuit breakers to be field-accomplished by OTHERS.

☐ UC—NO CIRCUIT BREAKERS OR RECEPTACLES. Provide blank receptacle plates located on top front face of raceway.

CORD & PLUG SETS

Optional cord and plug sets with strain relief devices can be furnished for all appliances with the exception of appliances equipped with cord/plug sets as standard equipment. Equipment requiring more than 50 amps shall be fitted with conduit connections by the UDS manufacturer, unless otherwise stated, for direct connection to the equipment by others. ☐ Provide electric cords for each appliance that does not have a cord from the factory.

FUEL SHUT-OFF

Terminals shall be provided for interconnecting the surface fire suppression system to the gas valves and/or main shunt-trip circuit breaker for fuel shut-off, as required by NFPA 96.

GAS SYSTEM

A black iron gas manifold shall be provided with pre-wired electrical or mechanical type gas valve. Internal connections to the manifold to be made with welded Thread-O-Let couplings. Unions shall be provided at each field joint. Each outlet connection can include an AGA-Approved shut-off valve and quick-disconnect coupling as an option. AGA-Approved flexible gas hosing can be provided as an option, and shall include one safety retainer cable for each mobile appliance, for attachment from the UDS structure to the appliance. All gas outlets shall be clearly labeled and color-coded for identification. ☐ Provide listed flexible gas hose with quick disconnect.

HOT & COLD WATER SYSTEM

Hot and cold water supply lines shall be hard-drawn type "L" copper insulated with 3/8" thick foam rubber throughout. Each outlet connection to be provided with a shut-off valve. A standard temperature/pressure gauge shall be located at the hot water supply inlet in the main riser. ☐ Provide flexible water hose with quick disconnect.

STEAM SYSTEM

Steam and condensate return pipes shall be provided with 3/4" fiberglass insulation throughout. Internal connections to the manifold to be made with welded Thread-O-Let couplings. Each outlet connection can include a shut-off valve and quick-disconnect coupling. The end riser shall be equipped with a float and thermostatic trap for condensate return. ☐ Provide flexible steam and condensate hoses with quick disconnect.

ELECTRICAL POWER DISTRIBUTION SCHEMES

Horizontal busbar or hard wire power distribution schemes are available with most Carroll UDISCO Utility Distribution Systems. With the UH arrangement of branch breakers (centralized in the main riser), hard wiring is employed from each of the individual branch circuit breakers to corresponding point-of-use electrical receptacles. With the UA or UB point-of-use arrangement of circuit breakers, the busbar power distribution scheme is always an option. Hard wiring of power distribution to point-of-use breakers may or may not be available, depending on the the number of breakers employed and their power requirements. Consult Carroll's Engineering Department.

BUSBAR SYSTEM: Employs three or four 100% copper bars having balanced load and phases, with system completely isolated from any plumbing compartments. The bars are fully insulated and capable of a minimum of 125% load capacity for the full length of the system. This busbar/branch circuit breaker arrangement greatly enhances the flexibility of the electrical system and facilitates the change out of point-of-use branch breakers.

HARD WIRED SYSTEM: With this power distribution scheme, individual branch circuit wiring is employed whenever the branch circuit breakers are mounted in the end riser. Hard wire distribution may be available with a point-of-use breaker arrangement. All wiring is run through a compartment fully insulated from plumbing components.

UDISCO UTILITY DISTRIBUTION SYSTEM SELECTION DESIGNATION

Carroll Utility Distribution Systems are identified by a series of letters and numbers which designates features.

BASIC CATALOG NUMBER:

I II III IV V VI VII VIII IX

Explanation of Codes:

I. LOCATION OF CIRCUIT BREAKERS

UA	Concealed point of use circuit breakers
UB.....	Exposed point of use circuit breakers
UH	Circuit breakers mounted on end riser
UCR	No circuit breakers—exposed point of use receptacles only
UC.....	No circuit breakers—exposed point of use blank receptacle plates only

II. BASIC MODEL NUMBER

IM	Island mount with rectangular risers
IML	Island mount with left or right extension on riser
IMT	Island mount with left and right extensions on riser
WM	Wall mount
CR	Under counter race
CM	Ceiling mount
TS	Tray slide
UTC	Under tray conveyor
BU	Basic universal
BU-CR	Basic universal counter race
BU-M	Basic universal island race
BU-WM	Basic universal wall mount
BU-R	Basic universal riser mount

III. ELECTRICAL RATING (V/Ph/Hz)

E1	120/1/60
E2	120-208/1/60
E3	120-208/3/60
E4	277-480/3/60
E5	480/3/60

Note: For Dual Voltage, a "/" is inserted (i.e., E1/E5)

IV. H Hot water
C Cold water

V. G Gas

VI. SSteam

VII. CWChilled water

VIII. CA.....Compressed air

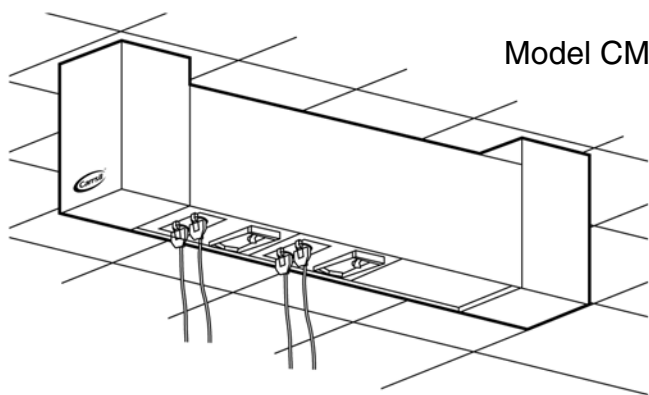
HHydraulic
Note: For Compressed Air and Hydraulic services, a "/" is inserted (i.e., CA/H)

IX. **LENGTH**.....In feet and inches (expressed as a decimal number to the nearest 6" increment, e.g. 10 feet 8 inches = 11.0)

EXAMPLE: A (UA-IM-E2-HC-G-S-CW-H-11.0) is a UDS with concealed point of use circuit breakers, an island mount model with an electrical rating of 120-208/1/60. It has hot and cold water, gas, steam, chilled water, and hydraulic connections.

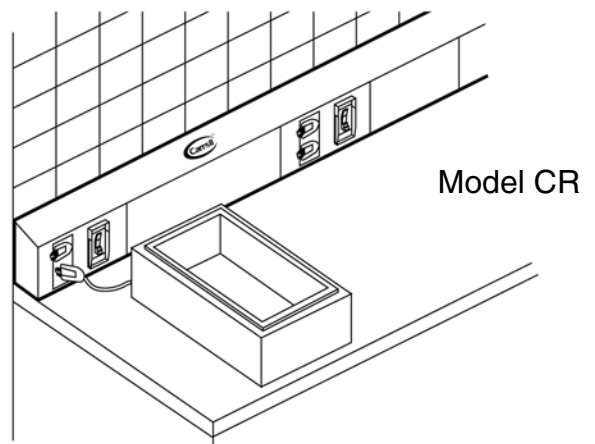
A CARROLL U.D.S. MAKES ALL THE DIFFERENCE

- ☐ Cooking line versatility, convenience, flexibility
- ☐ Additional capacities for future changes and expansion
- ☐ A fully U.L. Listed Appliance Center engineered and factory constructed to N.S.F. sanitation standards
- ☐ Optionally built-in ventilator and fire protection system components and controls
- ☐ Prison Security Package
- ☐ Special riser configurations to meet the project needs
- ☐ Nation-wide network of Approved Service Agents
- ☐ Specialty applications
- ☐ Quick disconnect fittings and color-coded hoses
- ☐ Cost effective method of distributing utilities in commercial cooking operations
- ☐ Eliminates expensive rewiring and piping when cooking line changes
- ☐ Ability to cantilever appliances and surface mount hose reels, faucets, and other buy-outs



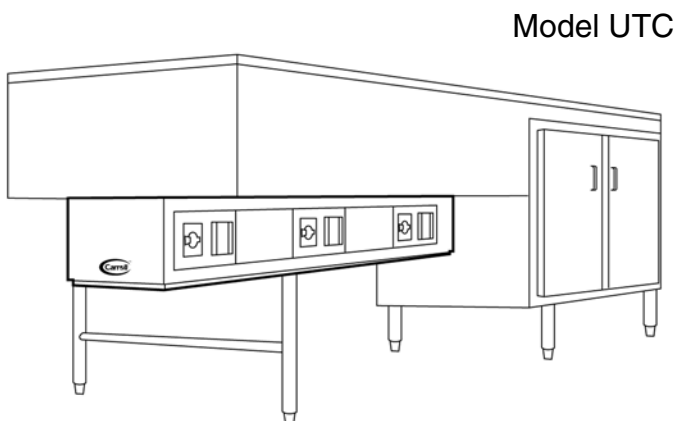
Model CM

CEILING-MOUNTED RACEWAY



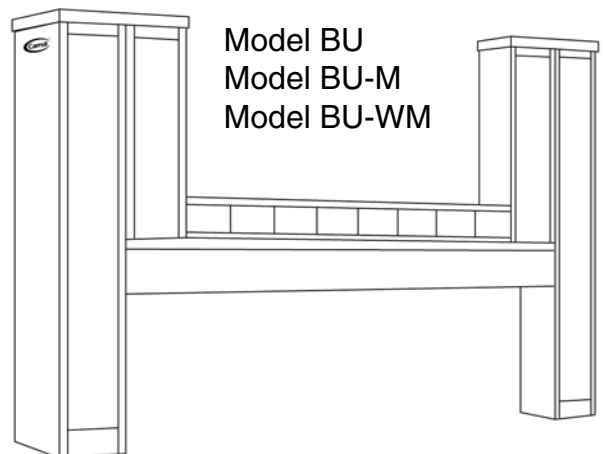
Model CR

COUNTER-MOUNTED RACEWAY



Model UTC

UNDER-CONVEYOR RACEWAY



Model BU
Model BU-M
Model BU-WM

BASIC UNIVERSAL RACEWAY