Bid Package Clarification and Changes

This Addendum dated May 6, 2019 for the Economic Development Center and Rowan Medicine shall be included as part of the Contract Bid Documents. This Addendum shall supplement and clarify the current Contract Bid Documents.

ADDENDUM #1 CONSISTS OF ALL OF THE ITEMS LISTED BELOW. PLEASE ACKNOWLEDGE RECEIPT OF THIS ENTIRE ADDENDUM BY SIGNING BELOW AND FAXING BACK IMMEDIATELY TO (856) 396-6205. THIS IS MANDATORY!! If this fax is unclear, please call (856) 396-6200. If you are not bidding this project, please write “No Bid” and fax this page back.

Signature

Company

1. Addendum #1 narrative, 126 items – (12 pages)
2. Bidder’s Checklist – Revised per Addendum #1 (2 pages)
3. Bid Form – Part B – Alternates – Revised per Addendum #1 (2 pages)
4. Bid Form – Part C – Unit Prices – Added per Addendum #1. (3 pages)
5. Hardware Set Revisions. (2 pages)
6. Specification Section 10150 – Ceiling Mounted Patient Lift System – Added per Addendum #1. (4 pages)
7. Sketch CSK-1: Site Plan B (1 page)
8. Sketch CSK-2: Grading and Drainage Plan B (1 page)
9. Sketch CSK-3: Lighting and Landscaping Plan – A (1 page)
10. Sketch CSK-4: Lighting and Landscaping Plan – B (1 page)
11. Sketch ASK-1 Revised Trash Enclosure Plan (1 page)
12. Sketch ASK-2 Revised Trash Enclosure Elevations (1 page)
13. Sketch ASK-3 Revised Building Elevations (1 page)
14. Sketch ASK-4 Revised Roof Plan (1 page)
15. Sketch ASK-5 Revised Roof Detail (1 page)
16. Sketch ASK-6 Revised Partial Section L-K (1 page)
17. Sketch ASK-7 Revised 2nd Floor Staff Lounge (1 page)
18. Sketch ASK-8 Curved Counter at B200 (1 page)
19. Sketch ASK-9 Café Plan – Option #7 with attachments (58 pages)
20. Sketch SSK-1 Partial Foundation Plan (1 page)
21. Sketch SSK-2 Soil Exchange Location Plan (1 page)
22. Specification Section 15190 Testing and Balancing – Added per Addendum #1. (2 pages)
23. Specification Section 15950 Testing and Balancing Furnished by Owner – Added per Addendum #1. (5 pages)
24. Specification Section 15995 Mechanical: Facility Start-Up/Commissioning – Added per Addendum #1. (5 pages)
Bid Package Clarification and Changes

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1. In Specification Section AIA Document A201-2007, Paragraph 10.3 Hazardous Materials and Substrates: Add the following:

   10.3.7 Prior to bringing any fill material (such as topsoil, engineered fill, DGA, tire scrub at the construction entrance, etc.) onto the project site, the Contractor must have the material tested and certified to be clean and free from any hazardous material. Provide this information per the submittal requirements via a shop drawing.

2. There are five (5) locations noted on Drawings A-3 through Drawing A-6 for a Hoyer Lift in the exam rooms A124, B117, C102, D104, D106 with a star and note reference to “Medical Equipment Schedule”. The Contractor shall provide the specified equipment in the schedule including the installation. See attached Specification Section 10150. Add the attached Specification Section 10150 - Ceiling Mounted Patient Lift System – Added per Addendum #1. (4 Pages)

3. Delete Specification Section 10650 - Operable Partitions. The project has no operable partitions.

4. On Federici and Aiken Site Drawing 11: Dense yew (Taxus Media) was incorrectly identified as Taxus Baccata on the plant list. Taxus Media is to be used.

5. Delete Specification Section Bidder’s Checklist and replace it with the attached Bidder’s Checklist – Revised per Addendum #1. (2 pages)

6. Delete Specification Section Bid Form – Part B - Alternates and replace it with the attached Bid Form – Part B - Alternates – Revised per Addendum #1. (2 pages)

7. Add the attached Specification Section Bid Form – Part C – Unit Prices – Added per Addendum #1. (3 pages)

8. On the Drawings: Provide the items noted on the attached sketches at the revised Transformer/Emergency Generator/Trash enclosure plan, elevations, grading & foundation plan. See attached sheets CSK-1, CSK-2, ASK-1, ASK-2 and SSK-1.

9. On Federici and Akin Site Drawing 8: Modify grading contours and add Inlet-A2A as shown on attached sketch CSK-2. Add 12" CMU/Brick retaining wall w/aluminum coping top as shown on Sketches ASK-1, ASK-2 and CSK-2.
10. On Federici and Akin Site Drawing 11: Relocate 2" conduit for electrical supply to parking lot lighting as shown on attached sketch CSK-3 and sketch CSK-4.


14. On Drawing A-26, Sections VII: Detail Section L/A-26, Delete Alucobond Panel System on parapet wall, provide continuous Brick Veneer to Aluminum Coping; Detail Section K/A-26, Add stainless steel handrails, 5” concrete ramp, Trash enclosure 12” Brick/CMU wall. See attached sheet ASK-6.

15. On Drawing A-28 thru A-32, Wall Detail Sections: Revise Material List Legend as follows,

   #8. (4) 6" METAL STUD TRACK FORM BOX BEAM, FILL INSIDE OF BOX BEAM WITH BATT INSULATION FOR WINDOW HEADER (TYP);
   #14. THERMALLY BROKEN ALUM. STOREFRONT SYSTEM VG 451T FIXED WINDOW W/ 1" LOW "E" TEMP. INSULATED TINTED GLASS. (SEE DETAIL SHEET 1,2,3/A-43)
   #21. 75% SOLID 8" CMU BELOW GRADE, GROUT SOLID BLOCK. (TYP.)


18. On Drawing A-53, Enlarged Furniture Plans and Elevation for Suite B: Add a 48” wide x 42” high sliding glass window and frame assembly to view between Nurse Station B-105 and Reception B-101. Delete a total of four (4) 24” wide wall hung cabinets (two (2) on each side of the wall). Provide the sliding glass window and frame assembly similar to the typical Reception desk.


20. On Drawing A-53, Enlarged Furniture Plans and Elevation for Suite B and the Finish Schedule: The Architect will provide a Floor Tile Pattern in each exam room and the corridor that will include up to seven (7) colors in a full tile pattern.

21. On Drawing A-53, Enlarged Furniture Plans and Elevation for Suite B: on elevation 5/A-53 delete one 30 inch wide wall hung cabinet and provide a 30 inch wide microwave shelf wall hung cabinet. Provide a GFCI duplex outlet inside the wall hung cabinet for the owner provided microwave as noted in this Addendum Item #50.

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Addendum #1 Narrative
22. On Drawing A-54, Enlarged Furniture Plans and Elevation for Suite C: Detail 6a/A-54, Change wall cabinet notes "(3) 36"W" to "(1) 36"W".

23. On Drawing A-55, Enlarged Furniture Plans and Elevation for Suite D: Detail 9a/A-55, Change wall cabinet notes "(4) 36"W" to "(2) 36"W".

24. On Drawing A-55, Enlarged Furniture Plans and Elevation for Suite D: Add a TV data and electric box in Family Medicine Waiting Area / Lobby D100 on the right-side wall that is adjacent to Main Lobby E110. Provide the necessary electrical power and data typical for a TV per Item #53 of this Addendum.

25. On Drawing A-55, Enlarged Furniture Plans and Elevation for Suite D: Delete the sink and sink base #402 in Admin Nurse D103 and add a 36" wide base cabinet in its place. Delete the associated plumbing.

26. On Drawing A-55, Enlarged Furniture Plans and Elevation for Suite D: Delete the base cabinet and add a sink and sink base #402 in Weight / Height Room D105. Add the associated plumbing. Provide GFCI protected duplex outlets at the sink location where the outlets are already shown.

27. On Drawing E4, Second Floor Electrical Plan, Learning Resource Area B200: Add four (4) duplex outlets with USB Ports along the exterior curved glass wall in addition to those outlets shown. Add two (2) devices to circuit 5 two (2) devices to circuit 7 on panel P2B1.

28. On Drawing E4, Second Floor Electrical Plan, IRT Office E202: Provide three (3) additional duplex outlets with three (3) additional dual data outlets. The location will be determined in the field.

29. Delete any reference to Owner provide projection screens. Provide all projection screens shown on the drawings as dotted. Provide a total of three (3) electric motorized recessed ten foot (10') wide ceiling mounted projection screens as per detail 54/A-34 (Two (2) are in the large classroom D209 and one (1) is in the OMM Lab D204). Provide all of the eight foot (8') wall mounted projection screens shown on the drawings including all eighteen (18) small group meeting rooms, large conference room E204, small conference room E201, and conference room 1404.

30. Refer to Drawing A-65, Legend – List of Equipment, for the equipment shown on the drawings for the circled numbers on the furniture drawings. This list of equipment includes the product description and basis of design manufacturer specification.

31. In Specification Section 08710 – Finish Hardware: Revise the Hardware sets per the attached "Hardware Set Revisions." (2 pages)

32. On Drawing S-1, Revise generator, transformer and trash enclosure size per attached sketch SSK-1. Provide 12" CMU/brick retaining wall at bottom right corner of trash enclosure. Top of wall is at elevation 73.75'.

33. On Drawing S-1, Lower all interior column footings to a minimum elevation of (-)3'-0" for wings A, B and C and increase the length of the columns accordingly. The columns are located between column B, C, D, E and F and column lines 2 through 12 equaling a total of 24 columns. Locate top of footings for these columns at elevation -2'-0". Many are already at this elevation at rain water conductors.
In the Base Bid Price provide for 1,300 cubic yards of soil exchange as defined in Unit Price #1 for wing D (between column lines G to J.4 and column 3 to 6.2). Provide a unit price per cubic yard of soil exchange associated with this base scope. This Unit Price will be used to add or deduct from the 1,300 cubic yards base scope of work. See attached SSK-2 for soil exchange location. The extent of required soil exchange will be as directed by the Owner’s Geotechnical Engineer as excavation work progresses.

The Geotechnical Engineering report is included in the contract documents. The Contractor’s means and methods to control and limit exposure to moisture will significantly effect the condition of the soil and its suitability for use as structural fill. The Contractor must maintain the optimum soil moisture content of the existing soil or provide soil exchange at no additional cost to the Owner. Extraordinary measures to protect the existing soil moisture content and limit exposure to moisture are required and expected.

All imported fill materials and top soil materials must be certified by the source (quarry) as "clean material". No Recycled Concrete Aggregate (RCA) is permitted.

34. On Drawing S-1, Provide concrete apron with turned down slab at Physical Therapy’s curved wall per architectural drawing. Provide slab reinforcing similar to turned down section 5/S-5.

35. On Drawing S-10, Revise detail 5 and 6 to match architectural addendum sketch ASK-5 with L3x3x1/4 kicker to stub post with 1/4” plate and (1)1/2” stainless steel bolt.

36. On Civil Site Drawing #11: Provide conduits and wiring serving the two (2) site signs (along the new entrance road, where the new entrance road intersects Tanyard Road and at the entrance to the parking lot from the new entrance road) as shown on Economic Development drawing #1/E4, Electrical Site Plan. This takes precedence over the conduits and wiring shown on Civil Site Drawing #11.

37. Specifications Section 16550-3.1: For conduits and raceways, fire stopping shall be by the electrical contractor installing the conduits/raceways. For cabling, fire stopping shall be by the contractor installing the cabling involved.

38. Specifications Section 16550-6.1: Change from category-5 cables to category-6A.

39. Specifications Section 16555, Part I, 5-f-1-f: Submit as-built drawings in both AutoCAD and PDF formats.

40. Specifications Section 16550, Part I, 6: Add calibration of equipment and proof that the calibration is less than 1 year old.

41. Specifications Section 16550, Part I, 7: Provide warranty duration as 30 years (in lieu of 20 years).

42. Specifications Section 16550, Part 3 (C), 4-a-6: Change from category-6 jacks to category-6A.

43. Specifications Section 16550, Part 3 (C), 5-b: Submit as-built drawings in both AutoCAD and PDF formats.
44. Specifications Section 16600-1.6: Acceptable manufacturers shall include Generac in addition to the manufacturers listed.

45. Rowan Medicine, Drawing #1/E1, First Floor Lighting Plan: At #C100 lobby, add one (1) type "EXIT" sign at the door leading to #E112 corridor.

46. Rowan Medicine, Drawing #1/E1, First Floor Lighting Plan: At #D117 collaborative conference room, add one (1) type "EXIT" sign (double sided with arrows) at a location visible from within #D117 collaborative conference room and #D115 conference room pointing towards the door to #D131 corridor. At #D117 collaborative conference room, add one (1) type "EXIT" sign at the door to #D131 corridor.

47. Rowan Medicine, Drawing #1/E2, First Floor Power Plan: Add two (2) fire alarm audio/visual horn/strobe locations (weatherproof) on the exterior of the building, one (1) at #B107 exam room and one (1) at #D113 exam room.

48. Rowan Medicine, Drawing #1/E2, First Floor Power Plan: At #A117 staff/residents hub, add one (1) telephone/data outlet with two (2) jacks/cables at #PR-A117 printer.

49. Rowan Medicine, Drawing #1/E2, First Floor Power Plan: At #BS1 stair "B" add one (1) sprinkler system flow switch connection and one (1) sprinkler system tamper switch connection.

50. Rowan Medicine, Drawing #1/E2, First Floor Power Plan: At #B112 collaborative conference room add #MO-B112 microwave oven connection at the new microwave oven shelf. Provide 3 #12, 3/4" C wiring from a current 20/1 spare circuit breaker in panel "P1B2" to a new 5-20R duplex receptacle at the equipment location.

51. Rowan Medicine, Drawing #1/E2, First Floor Power Plan: At #C117 staff/residents hub, add two (2) telephone/data outlets with two (2) jacks/cables at each of #PR-C111 and #PR-C112 printers.

52. Rowan Medicine, Drawing #1/E2, First Floor Power Plan: At #C100 lobby, see mechanical drawings for location of #VAV-52 electric heat VAV unit.

53. Rowan Medicine, Drawing #1/E2, First Floor Power Plan: At #D100 lobby, add #TV-D100C television connection. Provide 3 #12, 3/4" C wiring from a current 20/1 spare circuit breaker in panel "P1D3" to a new 5-20R duplex receptacle at the equipment location.

54. Rowan Medicine, Drawing #1/E2, First Floor Power Plan: At #D115 conference room, provide one (1) multiple use systems (telephone, data, audio, video, A/V control, and power) outlet, flush mounted in floor at the conference table location (in lieu of separate power and data floor boxes currently shown).

55. Rowan Medicine, Drawing #1/E2, First Floor Power Plan: At #E106 mechanical room, see mechanical drawings for location of #EF-15 exhaust fan.

56. Rowan Medicine, Drawing #1/E2, First Floor Power Plan: At #E106a hazardous waste storage, add #EF-14A exhaust fan connection. Provide 3 #12, 3/4" C wiring from a current 20/1 spare circuit breaker in panel "P1B2" to equipment via a new thermal overload (O/L) switch as local disconnecting means at equipment.
57. Rowan Medicine, Drawing #1/E2, First Floor Power Plan: Locate #EF-14 exhaust fan connection at #E106b regulated medical waste (in lieu of at #E106c custodian storage) and rename connection as #EF-14B.

58. Rowan Medicine, Drawing #2/E2, Cafe Power Plan: At #E101a storage, see mechanical drawings for locations of #DSS-15 ductless split indoor unit and condensate pump and #EF-16 exhaust fan.

59. Rowan Medicine, Drawing #1/E3, Second Floor Lighting Plan: At #E212 corridor, provide the exit sign at the door to #BS2 stair B as double-sides with directional arrows on both sides.

60. Rowan Medicine, Drawing #1/E4, Second Floor Power Plan: Typical of 18 locations at #A200, #A201, #A202, #A203, #A204, #A205, #B201, #B202, #C202, #D201, #D202, #D205, #D206, #D207, #D208, #D210, #D211, and #E203 small group meeting rooms:

A. At each room, provide one (1) multiple use systems (telephone, data, audio, video, A/V control, and power) outlet, flush mounted in floor at the conference table location (in lieu of separate power and data floor boxes currently shown).

B. Provide the power receptacle in each floor box on a new dedicated branch circuit (in lieu of connecting to the wall receptacle circuit in each room), connecting to circuits for rooms as follows: #A200 (circuit #P2A1-24), #A201 (circuit #P2A1-26), #A202 (circuit #P2A1-28), #A203 (circuit #P2A1-30), #A204 (circuit #P2A1-32), #A205 (circuit #P2A1-34), #B201 (circuit #P2B1-34), #B202 (circuit #P2B1-36), #C202 (circuit #P2C1-32), #D201 (circuit #P2D2-2), #D202 (circuit #P2D2-4), #D205 (circuit #P2D2-6), #D206 (circuit #P2D2-8), #D207 (circuit #P2D2-10), #D208 (circuit #P2D2-12), #D210 (circuit #P2D2-14), #D211 (circuit #P2D2-16), and #E203 (circuit #P2E1-20).

C. At each room, add six (6) duplex receptacles in the triangular pedestal desk, two (2) on each of the three (3) sides of each desk, mounted horizontally into furniture. Furnish and install a code-approved cord and plug whip for the furniture in each room. Plug whip into the floor outlet and wire the six (6) receptacles from the whip. Permanently fasten the cord to the furniture so the furniture can be unplugged and moved.

D. Owner shall provide the following at each triangular pedestal desk in each room: 1 Extron Controller with 8 buttons: PC, Display/Projector, Laptop, Vol Up, Vol Down & Mute. 1 unused button, 1 Tiny PC with DVD, and 9 Connection cables - retractable - with HDMI and a mini display port adapter.

61. Rowan Medicine, Drawing #1/E4, Second Floor Power Plan: At #A220 staff lounge add #CO-A220 copier connection. Provide 4 #10, 3/4" C wiring from a current 20/1 spare circuit breaker in panel "P1A1" to a new 5-20R duplex receptacle at the equipment location.

62. Rowan Medicine, Drawing #1/E4, Second Floor Power Plan: At #BS2 stair "B" add one (1) sprinkler system flow switch connection and one (1) sprinkler system tamper switch connection.

63. Rowan Medicine, Drawing #1/E4, Second Floor Power Plan: At #B200 learning resource area add four (4) duplex USB receptacles to the curved exterior wall (connect two (2) receptacles each to circuits #P2B1-5 and #P2B1-7). Add four (4) telephone/data outlets with two (2) jacks/cables to the curved exterior wall.
64. Rowan Medicine, Drawing #1/E4, Second Floor Power Plan: At #D203 research wet lab, see mechanical drawings for location of #DSS-7 ductless split indoor unit and condensate pump.

65. Rowan Medicine, Drawing #1/E4, Second Floor Power Plan: At #E201 small conference room, provide one (1) multiple use systems (telephone, data, audio, video, A/V control, and power) outlet, flush mounted in floor at the conference table location (in lieu of separate power and data floor boxes currently shown).

66. Rowan Medicine, Drawing #1/E4, Second Floor Power Plan: At #E202 IRT office, add three (3) duplex receptacles (connect two (2) receptacles to circuit #P2B1-19 and connect one (1) receptacle to circuit #P2E1-19). Add three (3) telephone/data outlets with two (2) jacks/cables. The location will be determined in the field.

67. Rowan Medicine, Drawing #1/E4, Second Floor Power Plan: At #E204 large conference room, provide one (1) multiple use systems (telephone, data, audio, video, A/V control, and power) outlet, flush mounted in floor at the conference table location (in lieu of separate power and data floor boxes currently shown).

68. Rowan Medicine, Drawing #1/E5, First Floor Security Plan: At #C117 corridor add one (1) ADA-door opener button and indication that door is activated by remote control door release pushbutton at the door to #C100 lobby.

69. Rowan Medicine, Drawing #1/E5, First Floor Security Plan: At #E112 corridor add one (1) ADA-door opener button and one (1) card reader outlet at the door to #C100 lobby.

70. Rowan Medicine, Drawing #1/E8, Electrical Room #E106 Power Plan: At #E106 mechanical room add four (4) sprinkler system flow switch connections and four (4) sprinkler system tamper switch connections.

71. Rowan Medicine, Drawing #1/E9, Electrical Site Plan: Add one (1) 2" conduit from the medical building electrical room to the street at Tanyard Road for site lighting.

72. Rowan Medicine, Drawing #1/E10, Single Line Diagram: Electrical contractor shall provide two (2) 5" utility company approved high voltage conduits (both active for loop-feed) to the new utility pad mounted transformer. E.C. shall provide AC Electric approved concrete pad, primary conduits, secondary conduits and conductors (new 2,500 A-4W underground feeder), and transformer grounding. AC Electric shall provide transformer, primary wiring, and shall make all primary and secondary final connections.

73. Rowan Medicine, Drawing #1/E10, Single Line Diagram: Provide the generator as natural gas as shown in the specifications. Disregard references to diesel fuel and fuel tank.

74. Rowan Medicine, Drawing #1/E12, Rowan University MDF Rack Detail: All PDU strips shall be APC (disregard references to Tripp Lite).

75. Rowan Medicine, Drawing #1/E12, Rowan University MDF Rack Detail, Note #6: Provide 30 year system warranty (in lieu of 20 year).

76. Rowan Medicine, Drawing #2/E12, Rowan University IDF Rack Detail: All PDU strips shall be APC (disregard references to Tripp Lite).
77. Rowan Medicine, Drawing #E16, Electrical Symbol List and Economic Development, Drawing #E8, Electrical Symbol List: Revise the following descriptions of symbols to read as follows:

A. "CAMPUS EMERGENCY TELEPHONE <BLUE>, WALL MOUNTED; PROVIDE ONE (1) 1.25" CONDUIT FOR TELEPHONE/DATA RUN FROM TELEPHONE STUBBED AND CAPPED INTO NEARBY ACCESSIBLE CEILING SPACE; PROVIDE POWER WIRING RUN IN 1" CONDUIT. PROVIDE TWO (2) CATEGORY-6A CABLES RUN FROM RCGC MDF/IDF TO PEDESTAL TERMINATED AT BOTH ENDS; PROVIDE TELEPHONE UNIT BY AS PER SPECIFICATIONS"

B. "FIRE ALARM CONTROL PANEL (F/A) LOCATION, SURFACE MOUNTED, CONTROL PANEL FURNISHED, INSTALLED, WIRED, AND/OR MODIFIED BY OWNER'S FIRE ALARM SYSTEM CONTRACTOR, E.C. SHALL PROVIDE POWER WIRING (SEE DRAWINGS), E.C. SHALL PROVIDE A TELEPHONE/DATA OUTLET (AS INDICATED ELSEWHERE ON THE ELECTRICAL SYMBOL LIST) MOUNTED ADJACENT TO CONTROL PANEL AND PROVIDE 27 mm (1") CONDUIT (WITH PULL WIRE) RUN FROM TELEPHONE/DATA OUTLET RUN TO THE MAIN TELEPHONE BACKBOARD WITH TWO (2) CATEGORY-6A CABLES RUN FROM RCGC TELEPHONE BACKBOARD TO PEDESTAL TERMINATED AT BOTH ENDS"

C. "CARD READER OUTLET [C], E.C. SHALL PROVIDE OWNER APPROVED OUTLET BOX IN WALL AND 21 mm (3/4") CONDUIT (WITH WIRING BY E.C. AS PER SPECIFICATIONS, #18 AWG, 6-CONDUCTOR, SHIELDED, STRANDED, PLENUM) RUN (CONCEALED IN WALL AND CEILINGS) FROM OUTLET TO SECURITY SYSTEM CONTROL PANEL; CARD READER AND ALL FINAL CONNECTIONS SHALL BE BY THE OWNER'S SECURITY VENDOR; (WP) INDICATES WEATHERPROOF"

D. "DOOR MONITORING CONTACT CONNECTION (DC), E.C. SHALL PROVIDE 21 mm (3/4") CONDUIT (WITH WIRING BY E.C. AS PER SPECIFICATIONS, #18 AWG, 4-CONDUCTOR, SHIELDED, STRANDED, PLENUM) RUN (CONCEALED IN WALL OR DOOR JAMB) FROM LATCH TO SECURITY ACCESS SYSTEM DOOR JUNCTION BOX; DOOR CONTACT (CONCEALED IN DOOR FRAME) AND ALL FINAL CONNECTIONS SHALL BE BY THE OWNER'S SECURITY VENDOR"

E. "DOOR RELEASE LATCH (OR MAGNETIC LOCK) CONNECTION (DR), G.C. SHALL FURNISH AND INSTALL LATCH IN DOOR FRAME, E.C. SHALL PROVIDE 21 mm (3/4") CONDUIT (WITH WIRING BY E.C. AS PER SPECIFICATIONS, #18 AWG, 4-CONDUCTOR, SHIELDED, STRANDED, PLENUM) RUN (CONCEALED IN WALL OR DOOR JAMB) FROM LATCH TO SECURITY ACCESS SYSTEM DOOR JUNCTION BOX; ALL FINAL CONNECTIONS SHALL BE BY THE OWNER'S SECURITY VENDOR"

78. Rowan Medicine, Drawing #E16, Electrical Symbol List: To clarify the security access control panel symbol, all wiring and conduits are by the E.C. and all final connections are by the owner's security vendor.

79. Rowan Medicine, Drawing #E18, Equipment Connection Schedule: Note #6 applies to ALL television connections (not just to those where note #6 is shown in the remarks).

80. Economic Development Center, Drawing #1/E2, Power Plan: Add two (2) fire alarm audio/visual horn/strobe locations (weatherproof) on the exterior of the building, one (1) at #1430 training room and one (1) at #1443 electrical room.
81. Economic Development Center, Drawing #1/E2, Power Plan: At #1404 conference room, provide one (1) multiple use systems (telephone, data, audio, video, A/V control, and power) outlet, flush mounted in floor at the conference table location (in lieu of separate power and data floor boxes currently shown).

82. Economic Development Center, Drawing #1/E2, Power Plan: At #1426 state main office, provide one (1) multiple use systems (telephone, data, audio, video, A/V control, and power) outlet, flush mounted in floor at the conference table location (in lieu of separate power and data floor boxes currently shown).

83. Economic Development Center, Drawing #1/E2, Power Plan: At #1431 conference room, provide one (1) multiple use systems (telephone, data, audio, video, A/V control, and power) outlet, flush mounted in floor at the conference table location (in lieu of separate power and data floor boxes currently shown).

84. Economic Development Center, Drawing #1/E2, Power Plan: At #1440 break room, see architectural drawings for location of #MO-1440 microwave oven.

85. Economic Development Center, Drawing #1/E2, Power Plan: At #1443 mechanical room add five (5) sprinkler system flow switch connections and five (5) sprinkler system tamper switch connections.

86. Economic Development Center, Drawing #1/E4, Electrical Site Plan: Add one (1) 2" conduit from the economic development building electrical room to the street at Tanyard Road for site lighting.

87. Economic Development Center, Drawing #1/E4, Electrical Site Plan: Wire site signs as shown on drawing #1/E4, disregard sign wiring shown on site/civil drawing #11.

88. Economic Development Center, Drawing #1/E6, Single Line Diagram: Electrical contractor shall provide two (2) 5" utility company approved high voltage conduits (both active for loop-feed) to the new utility pad mounted transformer. E.C. shall provide AC Electric approved concrete pad, primary conduits, secondary conduits and conductors (new 1,600 A-4W underground feeder), and transformer grounding. AC Electric shall provide transformer, primary wiring, and shall make all primary and secondary final connections.

89. On Drawing M-1: Note 11 - @ 44" x 18" duct; minimum area 8 Sq.Ft.

90. On Drawing M-1: EF-16 Storage Room E104A shall have thermostat set to maintain 80. +/-.

91. On Drawing M-1: SR-3 & ER-4 @ Cafeteria; location to be coordinated with menu boards

92. On Drawing M-1: EF-2 @ Toilet Room E104 fan to run continuously during occupied mode.

93. On Drawing M-1: All single Toilet Room fans shall have wall switch and be interfaced with lights.

94. On Drawing M-1: Opening in wall to return air shaft at Column 10-A.8 indicated by Note 12 shall be 4 Sq.Ft. for total of 12 Sq.Ft. (including 8 Sq.Ft. for other opening).
95. On Drawing M-1: EF-1 Room A114; add Note 54.

96. On Drawing M-1: Increase all duct sizes from main duct to inlet of VAV unit and FVAV units as follows:
   
   4" dia. to 5 dia.
   5" dia. to 6" dia.
   6" dia. to 8" dia.
   8" dia. to 10" dia.
   10" dia. to 12" dia.
   12" dia. to 14" dia.
   14" dia. to 16" dia.

97. On Drawing M-2: VAV-43; relocate minimum 3' from 84" x 24" return air opening.

98. On Drawing M-2: ER-1 symbol directly below EF-6 symbol refers to exhaust registers in Toilet Rooms E206/E207.

99. On Drawing M-2: AC-5 Note 44; both shall be 72" x 24".

100. On Drawing M-2: Increase all duct sizes from main duct to inlet of VAV unit and FVAV units as follows:

   4" dia. to 5 dia.
   5" dia. to 6" dia.
   6" dia. to 8" dia.
   8" dia. to 10" dia.
   10" dia. to 12" dia.
   12" dia. to 14" dia.
   14" dia. to 16" dia.

101. On Drawing M-2: Add acoustical wrap (Note 43) to the following ducts;

   AC-2 – 30"x20" supply duct for first 20' from unit.

   AC-2 – Supply air duct from unit discharge to duct in shaft and down to 2nd floor slab approximately 15' +/-.

   AC-1&3;

   44"x20' duct approximately 15'
   44"x20' duct approximately 30'
   36"x24' duct approximately 10'
   36"x24' duct to shaft approximately 10'
   42"x24' duct approximately 25'
   Discharge duct 48"x72" from unit intake

   Contractor shall include cost to furnish and install an additional quantity of 600 Sq.Ft. of specified wrap. Exact size and location to be determined prior to construction.

ROWAN COLLEGE AT GLOUCESTER COUNTY
ECONOMIC DEVELOPMENT CENTER AND ROWAN MEDICINE
Addendum #1 Narrative

103. On Drawing P-1: Add floor sink P-14B in Café Room E101 for sink #6 with indirect waste.

104. On Drawing P-1: Add Note 18 @ wall hydrant Column 9-F.1.

105. On Drawing P-1: Add one (1) floor sink for coffee maker, Item 13. See architectural plans for location. Connect to 3" dia. main and provide Note 68 indicating coffee machine.

106. On Drawing P-4: Gas pipe diagram; gas line serving rooftop units shall be above roof as indicated on floor plan. All rooftop gas pipe shall be painted yellow per the “Painting” Specification Section 09900, with a primer coat and two (2) finish coats of paint then labeled “Gas”.


108. On Drawing P-5: Horizontal line from S-5 shall be 2" dia. @ ¼".


110. On Drawing P-5: Sanitary riser diagram S-14A; add one (1) floor sink with kitchen equipment number 13 and Note 59 on floor sink with 1" dia.

111. On Drawing P-6: For clarification; All refrigerators shall have Oatey 039156 LF IMB wall box with 1/4" dia. flexible copper line with shutoff – Note 34 for refrigerators in Rooms A111, A123, B112, B105, C105, C103, C109, D117, D127, D130, A220 & E200; domestic riser 1-A-6 HWH-3 shall be HWH-1.

112. On Drawing P-9: Plan #2; HWH-3 shall be HWH-1.

113. In Specification Section 15010 – General Requirements: Part 3.13 - Section refers to equipment not furnished by Owner; delete electric heat.

114. In Specification Section 15010 – General Requirements: Part 1.16, #3 – add as follows:
- Provide acoustical insulation in curb of rooftop units per Section 15180, Part 2.02.
- Provide acoustical wrap on compressors of rooftop units; quantity of compressors/unit per Trane.

115. In Specification Section 15180 - Insulation: Part 2.01, #6 - Add "Where indicated on drawings as indicated by Note 43, and at additional duct per this addendum, provide an additional acoustical duct wrap. This is in addition to specified external duct insulation and/or internal duct liner. Acoustical insulation wrap for ducts shall be duct lagging 1 lb. / Sq.Ft. vinyl barrier with reinforced aluminum foil facing with quilted fiberglass decoupler. Sound Seal B-10 LAG/QFA-3 (or approved equal)."

116. In Specification Section 15180 - Insulation: Part 2.01, #7 - Add “Provide acoustical blanket around all compressors on all rooftop units. Blanket shall be removable with inner and outer chemical resistant Teflon fiberglass cloth high density material and vinyl. Noise reduction in “A” weighting 100-5000H, 29.5 dba per ASTM test procedure E1222-87. Blanket shall be insulate LT450TAST-2” or approved equal; Shannon Enterprises, distributed by BRD (610-863-6300). Quantity of compressors per Trane.”

ROWAN COLLEGE AT GLOUCESTER COUNTY
ECONOMIC DEVELOPMENT CENTER AND ROWAN MEDICINE
Addendum #1 Narrative Page 11 of 12
117. In Section 15605: Add to title "Equipment furnished by Owner”.

118. In Section 15651: Part 3.01, #6 – For clarification; Acoustical insulation specified for the roof curb shall be provided by the HVAC contractor. Contractor shall verify size required with Trane.

119. In Section 15930 Appendix: For clarification; The Owner furnished equipment cuts in appendix do not include all equipment and appurtenances. Refer to plans and specification for equipment quantities and specifications.

120. **Add the attached** Specification Section 15190 Testing and Balancing – Added per Addendum #1. (2 pages)

121. **Add the attached** Specification Section 15950 Testing and Balancing Furnished by Owner – Added per Addendum #1. (5 pages)

122. **Add the attached** Specification Section 15995 Mechanical: Facility Start-Up/Commissioning – Added per Addendum #1. (5 pages)

123. Please note that the “Index to the Specifications” Book 2 of 2 indicates “08710 Finish Hardware – Rowan Medicine” but should read “08710 Finish Hardware – Economic Development Center and Rowan Medicine” as the Specification Section 08710 does include hardware for both buildings.

124. Provide radon piping/venting per Detail 15/A-33 at Rowan Medicine and 25/A-13 at the Economic Development Center.

125. Provide (Flat) CS Acrovyn wall protection rub strip at Rowan Medicine building in all exam rooms on two (2) walls of each room.

126. On Drawing A-65 “Millwork 2” at the, “Trellis/Canopy design above Café counter area”, delete Note, “3 1/2” x 9 1/2” Microlam with field applied plastic laminated in wood color and pattern (typ)” and provide, “3 1/2” x 9 1/2” Microlam trellis painted per Specification Section 09900 Interior Wood.”
FAILURE TO PROVIDE THE FOLLOWING INFORMATION AND DOCUMENTATION IDENTIFIED IN THIS BIDDER'S CHECKLIST AT THE TIME OF BID MAY BE CAUSE FOR REJECTION

Initial to Reflect Compliance:

____ Bidder's Checklist (Include with your Bid Package)

____ BID FORM – PART A

____ BID FORM – PART B – ALTERNATES

____ BID FORM – PART C – UNIT PRICES

____ Subcontractor List: For Each Prime Subcontractor Listed on this Form, include the following:

A valid and active DPMC Notice of Classification, a Total Amount of Uncompleted Contracts Affidavit (form DPMC 701), No Material Adverse Change of Circumstances Form, Business Registration Certificate, Public Works Contractor Registration Certificate.

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____ Acknowledgment of Receipt of Addenda / Clarifications. If no Addenda / Clarifications are issued, then check the Box on the Form

____ Hold Harmless Agreement

____ Certification Regarding the Debarment, Suspension, Ineligibility and Voluntary Exclusion (Contractor and Subcontractor)

____ Approved Apprenticeship Form

____ Affirmative Action Requirements

____ Prevailing Wage Rate Requirements

____ Non-Collusion Affidavit

____ New Jersey State Form Notice of Classification

____ New Jersey State Form Uncompleted Contracts
BIDDER’S CHECKLIST – REVISED PER ADDENDUM #1

___ No Material Change of Circumstances
___ Statement of Ownership
___ Disclosure of Claims or Suits (pursuant to Instruction to Bidders ¶21)
___ Disclosure of Investment Activities in Iran
___ Bid Bond
___ Consent of Surety
___ Disclosure of Contributions to New Jersey Election Law Enforcement Commission Form
___ Letter of Assent
___ Public Works Contractor Registration Certificate
___ Business Registration Certificate (due prior to contract award for Contractor and all Prime Subcontractors)

By signing below, bidder acknowledges that he/she has read the AMERICANS WITH DISABILITIES ACT OF 1990 which has been included in the Specifications in the Instructions to Bidders.

I acknowledge that the above information is included with my Bid Package.

Acknowledged for: ____________________________________________

(Name of Bidder)

By: _________________________________________________________

(Signature of Authorized Representative)

Name: _______________________________________________________

Title: ________________________________________________________

END OF SECTION
BID FORM - PART B – ALTERNATES – REVISED PER ADDENDUM #1

1.1 GENERAL

A. An alternate is an amount proposed by bidders and stated on the Bid Form for certain work that may be added to or deducted from the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents. The criteria for accepting alternates is to maximize the benefit to the Owner.

1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate the Alternate into the Work. No other adjustments are made to the Contract Sum.

B. Coordination: Modify or adjust affected adjacent Work as necessary to completely and fully integrate that Work into the Project.

C. Schedule: A "Schedule of Alternates" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials necessary to achieve the Work described under each alternate. The Contractor shall enter the amount to be added or deducted from the base contract amount for each alternate listed below. Fill in “0” or N/A if no work or cost is associated with an alternate.

1.2 PRODUCTS (Not Applicable)

1.3 EXECUTION

SCHEDULE OF ALTERNATES

1. ROWAN MEDICINE: At the Rowan Medicine Building provide Wall Protection in accordance with Specification Section 10260 – Wall Protection, including wall accent rails, wall protection panels and corner guards in the corridors of all four (4) clinical suites. The Base Bid includes the hallway walls in the main lobby area of the Rowan Medicine Building.

Alternate #1 Add $________________________

2. ROWAN MEDICINE: At the Rowan Medicine Building ONLY provide a Deduct Alternate Price to delete the IT Infrastructure and Cabling System Scope of Work as described in Specification Section 16555– Telecommunications and Low Voltage Cabling System and the Contract Drawings.

Work included in this deduct alternate includes, Category 6A cabling, jacks, final connections and testing to all workstations, systems furniture, desks, wall outlets, cameras, vending machines, wifi boxes, smart refrigerators, TV’s, kiosks, fire alarm and ATC panels, data outlets in miscellaneous locations and any “Edge” device requiring a data outlet connection.

Deduct alternate also includes IT infrastructure hardware including racks, patch panels, mounting of Owner switches, mounting of Owner UPS units, ladder racks, fiber cables, final connections, testing and fire stopping in the Rowan Medicine Building.
The Base Bid includes all outlet boxes, conduit stubs in walls, conduits between floors, conduits between buildings, conduits between rooms, pull strings, grounding, power wiring and power receptacles.

The Base Bid also includes this Scope of Work for the Economic Development Center and the IT Infrastructure work linking the RCGC Campus College Center and the two new Buildings.

This Alternate shall be a deduct for only the Rowan Medicine portion of this scope.

Alternate #2 DEDUCT

$__________________________

END OF SECTION
BID FORM - PART C - UNIT PRICES - ADDED PER ADDENDUM #1

1.1 GENERAL

A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if the estimated quantities of Work required by the Contract Documents are increased or decreased.

B. Unit prices include all necessary material to fully furnish, plus cost for delivery, installation, insurance, overhead, profit, and applicable taxes. The prices shown in the schedule are for additions to the contract. When these prices are used for credits to the contract they may be reduced by ten percent (10%).

C. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

1. The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices, and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.

D. Schedule: A "Unit Price Schedule" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials described under each unit price. The Contractor shall submit a complete Unit Price Schedule. The Schedule MUST contain the Unit Prices for All Sub-Contractors listed on the Bid Form - Part A. If there is no cost associated with the Unit Price, put "0" or N/A in the space. If the space is left blank, we will assume that no cost is associated to that Unit Price.

UNIT PRICE SCHEDULE

1. ROWAN MEDICINE – WING D: Provide a unit price for soil exchange. This Unit Price shall include the removal of unsuitable soil to be stockpiled, graded, seeded and stabilized on site as directed by the Construction Manager and Gloucester County Soil Conservation Official and new certified clean structural fill imported, placed and compacted in 8” lifts.

$_____________ per cubic yard

2. Provide a 24 strand single mode fiber optic cable from the first floor Rowan MDF to the second floor Rowan IDF pulled in the spare conduit.

$_________________________ Lump Sum
3. Submit Unit Prices for each item listed below. For each item, include 50' of 3/4" conduit (base pricing on utilizing EMT conduit) and associated wiring (utilize 3 #12 wiring for power and lighting devices and utilize appropriate systems wiring for other devices) including all associated fittings, boxes, hardware, flexible connections, etc. As required to completely provide the item listed. Unit price shall include connecting to currently specified wiring anywhere within 50'0" of the new device location. For fire alarm devices, please note that system programming (and related manufacturer's representative services) associated with unit price devices is included in the base bid (see fire alarm specifications for information).

One (1) 20A, 120V Duplex Receptacle

$ __________________ each

One (1) 20A, 120V Combination Duplex Receptacle And Duplex Universal Serial Bus (USB) Charger

$ __________________ each

One (1) 20A, 120V Duplex GFCI Type Receptacle

$ __________________ each

One (1) 20A, 120V Duplex Receptacle, Flush Mounted In Floor

$ __________________ each

One (1) Multiple Use Systems Outlet, Flush Mounted In Floor

$ __________________ each

One (1) 0-10 V, 30 Ma, 8 A, 120/277 V, Light Emitting Diode (LED) Driver Or Fluorescent Electronic Ballast Combination Dimmer Switch And Occupancy Sensor

$ __________________ each

One (1) Type "A" Luminaire

$ __________________ each

One (1) Fire Alarm Pull Station

$ __________________ each

One (1) Fire Alarm Audio/Visual Horn Strobe

$ __________________ each
BID FORM - PART C - UNIT PRICES – ADDED PER ADDENDUM #1

One (1) Telephone/Data Outlet, With 2-Cable Data (CAT-6A) with 200' Horizontal Cabling, 2 Jacks, Testing, and Tie-Ins To A Patch Panel

$________________________ each

One (1) Fully Populated 48-Port CAT-6A Patch Panel

$________________________ each

One (1) Install Owner Furnished Network Switch In Rack

$________________________ each

One (1) 3-Gang Audio/Visual Box In The Wall With Three (3) 2" Conduits Up To Ceiling and Blank Cover Plate

$________________________ each

END OF SECTION
ROWAN MEDICINE HARDWARE

HW sets 007 and 008: Delete Removable Mullion KR9954STAB.

HW sets 007 and 008: Delete Mullion Seals 8780NBK PSA.

ALL HW Sets: Delete Door Contact Switch 679-05HM.

HW Sets 001, 002, 003, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 019, 020, 021, 022, 023, 024, 025.1, 025.2, 027, 028, 029, 030, 031, 032, 033, 035, 036, 037.1, 037.2, 037.3, 037.4, 039, 040, 041, 042.1, 042.2, 043, and 044: Add: All Cylinders and Cylinder Housings must be BEST SFIC.

HW Sets: 001,002,003,005,006,007,008,009,010,011,012,013,014,015,019,020,021,022,023,024,025.1,025.2,027,028,029,030,031,032,033,035,036,037.1,037.2,037.3,037.4,039,040,041,042.1,042.2,043, and 044: Delete Medeco LFIC Mortise, LFIC Rim, and LFIC X4 Removeable Core.


HW sets 012 and 044: Add CDSI.

HW Sets 011,013,015,027,033,036,038,042.1,042.1, and 043: Use PS902 Power Supply.

HW Sets 007 and 008: Use PS904-9002RS-9004RL Power Supply.

HW Set 019: Delete SL8820, Add SL8822 on all public restrooms.

HW Set 024: Delete 1006CS-Y-HD.

HW Sets 013, 024, 025, and 028: Add Sallis Mortise Escutcheon A9660J00IM38W, Mortise Lock Body LA1T0570A21IM8, Sallis Mortise Spacer SP22049S-14-IM.

HW Sets 005, 024,025.1,025.2, and 028: Delete Power Supply.

HW Set 013: Delete Credential Reader.

HW Sets 015 and 042: Delete EPT-10.

Add: 4 PD2514B LFIC 2" 4-3/8 6 Pin YA Padlocks With X4 Medeco LFIC’s for Gate.

Add: 1 ea. 8805 YA lock body, 1 ea. 8807 YA lock body.
ECONOMIC DEVELOPMENT CENTER HARDWARE

HW Sets WF-002, WF-003, WF-004, and WF005: Delete Mullions KR4954STAB, and Mullion Seals 8780NBK PSA from sets.


All Sets: Delete Door Contact Switch 679-05HM.

HW Set WF-007: Delete SL8820; Add SL8822.

HW Sets WF-004 and WF-005: Delete MED LFIC Rim Cylinder Housings w/1765.656 and MED LFIC Mortise Cylinder Housings w/1765.656; Add YALE LFIC Rim Cylinder 1212 w/1765.500 Housings on sets and YALE LFIC Mortise Cylinder Housings 2221 w/1765.500.

All LFIC Housings must be Yale for Medeco X4 Cores Both Rim 1212 w/1765.500 and Mortise 2221 w/1765.500.

HW Sets WF-007, WF-008, WF-009 and WF010: Add Yale LFIC Mortise Housing 2221 w/1765.500


HW Sets WF-004 and WF005: Add RX-QEL-9849EO-24VDC & RX-QEL-9849-NL-OP-110-MD-24VDC.

HW Set WF-017: Delete Salto Lock. Add YA SL8805, Add HES Strike 1006 with KM faceplate.

HW Set WF-021: Delete SL8805.

HW Set WF-022: Delete PBCNxSL8805x2196 w/Temp Core 626, Add PBCN x SL 8807x2221x626 w/Temp Core 626.

HW Sets WF-006, WF-013, WF-017, and WF-022 Add: 5 PS902-9002RS Power Supplies.


Add: 4 PD2514B LFIC 2” 4-3/8 6 Pin YA Padlocks With X4 Medeco LFIC’s.

Add: 1 ea. 8805 YA Mortise lock body, Add 1 ea. 8807 YA lock body.
PART 1 • GENERAL

1.1 DESCRIPTION

Ceiling Mounted Patient Lift Systems for the transfer of physically challenged patients are specified in this section.

1.2 RELATED WORK

A. REQUIREMENTS FOR ELECTRICAL INSTALLATIONS: General Electrical Requirements and items.

1.3 QUALITY ASSURANCE

Certification for compliance is required for Ceiling Mounted Patient Lift Systems. The Contractor shall provide certifications by an independent third party who will conduct testing to ensure that the ceiling lift and charging system are safe and in compliance with ISO 10535 & UL 60601-1.

1.4 SUBMITTALS

A. Certificates of Compliance upon final testing as part of O&M documents.

B. Provide the following in Shop Drawings:

1. Lifting Capacity
2. Lifting Speed
3. Horizontal Displacement Speeds
4. Horizontal Axis Motor
5. Vertical Axis Motor
6. Emergency Brake
7. Emergency Lowering Device
8. Emergency Stopping Device
9. Electronic Soft-Start and Soft-Stop Motor Control
10. Current Limiter for Circuit Protection
11. Low Battery Disconnect System
12. Strap Length
13. All equipment anchors and supports. Submittals shall include weights, dimensions, center of gravity, standard connections, manufacturer's recommendations and behavior problems (e.g., vibration, thermal expansion,) associated with equipment or piping so that the proposed installation can be properly reviewed.
14. Individual Room layouts showing location of lift system installation shall be approved by the Owner or Construction Manager before proceeding with installation of lifts.
15. A letter of compliance with Item 1.5 “applicable publications” from the manufacturer.
1.5 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are listed in the text by the basic designation only. The Patient Lift System shall comply with these requirements/recommendations.

B. International Organization for Standardization (IOS):

10535-06 Hoist for the Transfer of Disabled Persons-Requirements and Test Methods

C. Underwriters Laboratories (UL):


94-2013 UL Standards for Safety Test for Flammability of Plastic Materials for Parts in Devices and Appliances-Fifth Edition

D. International Electromagnetic Commission (IEC):


PART 2 • PRODUCTS

2.1 GENERAL

A. Provide a complete Patient Lift System including the ceiling lift unit and track systems. The basis of design is as manufactured by Guldmann Inc. or approved equal.

2.2 CEILING TRACK SYSTEM

A. The Ceiling Track shall be made from high strength extruded aluminum T66081-T5 at a thickness of 3/16" (4.8mm).

1. Ceiling track fixed rails shall be end supported GH# series rails of depth as required for indicated span and lift rating.
2. Fixed rails shall be end supported unless otherwise noted.
3. Fixed rails shall be surface mounted
4. Fixed rails shall be support by wall brackets as appropriate to mount to structure provided. Wall brackets shall be concealed. Upright supports are not permitted.
5. Fixed rails shall be attached & supported to steel beams above using Unistrut Provide the Unistrut System and components to furnish a complete lifting unit system.
2.3 LIFT UNIT

A. The Lift Unit shall be constructed of a steel frame system (2205lbs / 1000kg tested) driven by a gear reduced high torque motor

B. The Lift System shall meet or exceed the following specification:

1. Model Type: GH3+ 250 110 1000 (550lbs lifting capacity) or approved equal.
2. Electronic soft-start and soft-stop motor control
3. Emergency lowering device
4. Emergency stopping device
6. Safety device that stops the motor to lift when batteries are low.
7. Lifting speed: 2.3 in/s (6 cm/s), 1.6 in/s (3.5 cm) in full capacity
8. Horizontal displacement speed: 5.9 in/s (150 mm/s)
9. Horizontal axis motor: 24V DC at 62 watts and vertical axis motor at 110 watts
10. Emergency brake (in case of mechanical failure)
11. Strap length up to 90 in (2.3 m) tested for 2998 lbs (1360 kg)
12. Cab: VO plastic – fire retardant, UL 94
13. Integrated Scale in remote control
14. Wi-Fi Capabilities

2.3 MOTORS

A. Vertical Movement-DC Motor

1. Type: Class A, fully enclosed, permanent magnet.
2. Rating: 24V DC, 1.1A, 110W, 4000 RPM, 0.3N-m.
3. Mounting: Secured to chassis.

B. Horizontal Movement-DC Motor

1. Type: Fully enclosed, permanent magnet, integral reducer.
2. Rating: 24V DC, 1.8A, 62W, 260 RPM, 1.0N-m.
3. Mounting: Secured to chassis.

2.4 BATTERIES

A. The life cycle (number of charging cycles) for batteries shall be in compliance with IEC 801-2. B. Provide rechargeable NiMH batteries with maximum 2 hour charging time I battery.
2.5 CHARGER
   A. Charger Input: 100-240V AC, 50/60 Hz.
   B. Charger Output: 27V DC, 1A max.
   C. In-rail continuous charging with battery indicator lights.

2.6 STRAPS AND SLING
   A. The straps shall be made of threaded nylon. The straps shall ensure the patient's safety by preventing the patient from falling out of the sling.
   B. The sling shall be made from a polyester/nylon net material that is pliable, breathable and easy to use. The sling shall cradle the body of the patient. One sling to be provided with each system.

2.7 AC/DC TRANSFORMER
   A. 100-115/230V AC, 50/60 Hz Transformer provided by manufacturer

PART 3 • EXECUTION

3.1 INSTALLATION
   A. Install ceiling mounted patient lift system as per manufacturer's instruction and under the supervision of manufacturer's qualified representative and as shown on drawings.
   B. The distance in between the suspended ceiling and anchors is more than 36", therefore, lateral braces will be required. Consult with the manufacturer and provide lateral braces.

3.2 INSTRUCTION AND PERSONNEL TRAINING
   A. Training shall be provided for the required personnel to educate them on proper operation and maintenance for the lift system equipment.

3.3 TEST
   A. Conduct performance test, in the presence of the Owner, Greyhawk CM and a manufacturer's field representative, to show that the patient lift system equipment and control devices operate properly and in accordance with design and specification requirements.

END OF SECTION
LOCATION OF 40" HIGH MEGANITE COUNTERTOP REFER TO COLOR SS-2 ON FINISH SCHEDULE.

RAKKS CANTILEVER SUPPORT BRACKET #EH-1212, TYP.

SECTION OF WINDOW COUNTER LEARNING RESOURCE AREA RM #B200
ADM-2
SCALE: 1/4"=1'-0"

LEARNING RESOURCE PLAN
SCALE: N.T.S.

PROJECT NAME:
ROWAN COLLEGE AT GLOUCESTER COUNTY
ROWAN MEDICAL CENTER
PROJECT NUMBER:
18-75
DATE: 5/6/19
ASK-8
# ROWAN MEDICINE CAFÉ EQUIPMENT LIST

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<th>DESCRIPTION</th>
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<th>D (in.)</th>
<th>H (in.)</th>
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<td>Base Bid</td>
<td>Hand Sink Advance TABCO Model 7-PS-50 Provide soap dispenser</td>
<td>17.25</td>
<td>15.25</td>
<td>13.00</td>
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<td>NIC</td>
<td>Turbo Chef (Counter Top Mounted) 30-35 AMP 208/240V 7,400 WATTS</td>
<td>24.00</td>
<td>31.25</td>
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<td>3</td>
<td>NIC</td>
<td>Refrigerator (under counter) TUC-24G-HS-FG101 115V/60Hr/IP</td>
<td>24.00</td>
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<td>NIC</td>
<td>Trash Container (undercounter) Provide a 12&quot; diameter hole in SS counter</td>
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<td>custome SS drawers</td>
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<td>7</td>
<td>NIC</td>
<td>Ice Storage Bin by Owner installed by Contractor SS counter with indirect drain waste</td>
<td>24.00</td>
<td>24.00</td>
<td>18.00</td>
<td>Provided by Owner/Field installed by Contractor</td>
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<td>NIC</td>
<td>Blendtec Connoisseur 825 sound reduction blender CB25C11Q-BIGBID</td>
<td>19.00</td>
<td>9.00</td>
<td>17.00</td>
<td>Provide Shop Drawings coordinated with NIC equipment</td>
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<td>9</td>
<td>Base Bid</td>
<td>Custom Stainless Steel Counter with 6&quot; SS back splash (2 piece field-welded seam)</td>
<td>192.00</td>
<td>32.00</td>
<td>36.00</td>
<td>Provide two piece field-welded seam</td>
</tr>
<tr>
<td>10</td>
<td>NIC</td>
<td>Mobile Sandwich/Salad Table Refrigerator KRATOS 69K-770 49&quot;W 120V 14 1/4 HP</td>
<td>49.00</td>
<td>31.00</td>
<td>46.00</td>
<td>On Castors</td>
</tr>
<tr>
<td>11</td>
<td>NIC</td>
<td>Undercounter Air Curtain Merchandiser Structural Concepts Co 36R-UC-QS 120V</td>
<td>36.00</td>
<td>33.00</td>
<td>33.00</td>
<td>Provided by Owner/Field installed by Contractor</td>
</tr>
<tr>
<td>12</td>
<td>NIC</td>
<td>Register/Cashier - need data and power</td>
<td>25.00</td>
<td>22.00</td>
<td>23.00</td>
<td>Provided by Owner/Field installed by Contractor</td>
</tr>
<tr>
<td>13</td>
<td>NIC</td>
<td>Expresso/Coffee Machine UNIC MIRA 2 Group Volume TRK 30 AMP/220V M1-2G-AV</td>
<td>25.00</td>
<td>22.00</td>
<td>23.00</td>
<td>4,500 WATTS</td>
</tr>
<tr>
<td>14</td>
<td>Base Bid</td>
<td>Custom Plastic Laminate Base Cabinet with solid-surface Meganite counter</td>
<td>225.00</td>
<td>36.00</td>
<td>34.00</td>
<td>Provide Shop Drawings coordinated with NIC equipment</td>
</tr>
<tr>
<td>15</td>
<td>NIC</td>
<td>Mobile Marchia MB38-D35 Curved Glass Dry Bakery Merchandiser</td>
<td>36.00</td>
<td>26.60</td>
<td>50.20</td>
<td>115V/60H1/5.5 AMPS on castors</td>
</tr>
<tr>
<td>16</td>
<td>NIC</td>
<td>Mobile Refrigerator (2) drawer base Defielf 36&quot; REF 2.9A/60Hr/IP/115V/1/5 HP</td>
<td>36.00</td>
<td>32.00</td>
<td>26.00</td>
<td>on castors</td>
</tr>
<tr>
<td>17</td>
<td>NIC</td>
<td>Mobile Condiment Cart</td>
<td>60.00</td>
<td>30.00</td>
<td>46.00</td>
<td>on castors</td>
</tr>
<tr>
<td>18</td>
<td>NIC</td>
<td>Bunn Brewise Dual Soft Heat Coffee 120V/1/60H</td>
<td>18.00</td>
<td>25.00</td>
<td>36.00</td>
<td>Counter Top</td>
</tr>
<tr>
<td>19</td>
<td>NIC</td>
<td>&quot;MIRA&quot; TV Digital Menu Display System</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Base Bid</td>
<td>Advance TABCO FS-3-1620-18RL 3-Pot SS Sink</td>
<td>64.00</td>
<td>26.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Base Bid</td>
<td>Advance TABCO K-245-24&quot; Utility Shelf with mop, broom and rag hooks</td>
<td>24.00</td>
<td>8.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>Not used</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>NIC</td>
<td>MANITOWOC 1DTO42OA Ice Machine and Ice Storage Bin 115V/60Hr 1 PHASE</td>
<td>22.00</td>
<td>34.00</td>
<td>80.00</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>NIC</td>
<td>Freezer True Refrigeration T-19 F2-HC 3.7AMP/1/2HP</td>
<td>27.00</td>
<td>24.00</td>
<td>78.00</td>
<td>115V/60Hr/IP</td>
</tr>
<tr>
<td>25</td>
<td>NIC</td>
<td>81&quot; W Refrigerator (3) Door Refrigerator True Refrigeration T-72-HC, 72 Cu.Ft.</td>
<td>79.00</td>
<td>30.00</td>
<td>84.00</td>
<td>120V/1/2 HP</td>
</tr>
<tr>
<td>26</td>
<td>Base Bid</td>
<td>Mobile SS Wire Shelving Unit on 5&quot; castors Model H5472</td>
<td>48.00</td>
<td>18.00</td>
<td>63.00</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Base Bid</td>
<td>Mop Sink Floor Base</td>
<td>24.00</td>
<td>20.00</td>
<td>10.00</td>
<td>See Plumbing Drawings</td>
</tr>
</tbody>
</table>

CSK 7 April 12, 2019
GA# 18-75
1. CAFE REAR WALL PLAN - OPTION #7
   SCALE: \( \frac{1}{4} '' = 1' - 0'' \)

2. CAFE REAR WALL ELEVATION - OPTION #7
   SCALE: \( \frac{1}{4} '' = 1' - 0'' \)
## Mechanical Schedule

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>WATER</th>
<th>WASTE</th>
<th>GAS</th>
<th>RI HGT AFF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CW HW</td>
<td>DIR</td>
<td>IND</td>
<td>SIZE</td>
</tr>
<tr>
<td>1</td>
<td>Hand Sink</td>
<td>⅜&quot;</td>
<td>⅜&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Sink</td>
<td>⅜&quot;</td>
<td>⅜&quot;</td>
<td>1⅛&quot;</td>
<td>to floor</td>
</tr>
<tr>
<td>7</td>
<td>Ice Storage Bin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Espresso Coffee Machine</td>
<td>⅜&quot;</td>
<td>1&quot;</td>
<td></td>
<td>to floor</td>
</tr>
<tr>
<td>18</td>
<td>Coffee Brewing System</td>
<td>⅜&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>3 Compartment Pot Sink</td>
<td>⅜&quot;</td>
<td>⅜&quot;</td>
<td>1⅛&quot;</td>
<td>to floor</td>
</tr>
<tr>
<td>23</td>
<td>Ice Machine With Bin</td>
<td>⅜&quot;</td>
<td>1&quot;</td>
<td></td>
<td>to floor</td>
</tr>
<tr>
<td>27</td>
<td>Mop Sink</td>
<td></td>
<td>⅜&quot;</td>
<td>⅜&quot;</td>
<td>2&quot;</td>
</tr>
</tbody>
</table>

**NOTES:** Item #13, 18 & 23 - water filters may be required based on water hardness, etc.

**Prepared For:** Garrison Architects
Bellmawr, New Jersey

**Project:** Rowan Medical Center Cafe
Gloucester County, NJ

**Date:** 4/26/2019
Taff S. Nash
Food Service Consultant
4 Spring House Lane
Denver, PA 17517

---

**Cafe Mechanical Rough-in Schedule**

**Scale:** N. T. S.

---

**Garrison Architects**
A Professional Corporation of Architects and Planners

713 Creek Road, Bellmawr, New Jersey 08031 (856) 396-6200

**Project Name:** Rowan College at Gloucester County
Rowan Medical Center

**Project Number:** 18-75

**Date:** 5/6/19
### ELECTRICAL SCHEDULE

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>HP</th>
<th>VOLTS</th>
<th>PH</th>
<th>KW</th>
<th>AMPS</th>
<th>HGT AFF</th>
<th>RECEP</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>CONVECTION MICROWAVE OVEN</td>
<td>208/240</td>
<td>7.4</td>
<td>1</td>
<td>30</td>
<td>48&quot;</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>UNDERCOUNTER REFRIGERATOR</td>
<td>120</td>
<td>1</td>
<td>2</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>BLENDER</td>
<td>120</td>
<td>1</td>
<td>48&quot;</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>SANDWICH SALAD PREP TABLE</td>
<td>120</td>
<td>1</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>UNDERCOUNTER MERCHANDISER</td>
<td>120</td>
<td>1</td>
<td>12</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>CASH REGISTER</td>
<td>120</td>
<td>1</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>ESPRESSO COFFEE MACHINE</td>
<td>120</td>
<td>1</td>
<td>30</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>BAKERY MERCHANDISER</td>
<td>120</td>
<td>1</td>
<td>3.7</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:** * Sub-up service, branch to connection

**PREPARED FOR:** GARRISON ARCHITECTS
**BELLMAWR, NJ**

---

**PROJECT:** ROWAN MEDICAL CENTER CAFÉ
**GLOUCESTER COUNTY, NJ**

**DATE:** 2/6/75

---

### ELECTRICAL SCHEDULE

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>HP</th>
<th>VOLTS</th>
<th>PH</th>
<th>KW</th>
<th>AMPS</th>
<th>HGT AFF</th>
<th>RECEP</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>2 DRAWER REFRIGERATED BASE</td>
<td>1/6</td>
<td>120</td>
<td>1</td>
<td>6</td>
<td>24&quot;</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>COFFEE BREWING SYSTEM</td>
<td>120/240</td>
<td>1.8</td>
<td>1</td>
<td>19.1</td>
<td>24&quot;</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>ICE MACHINE WITH BIN</td>
<td>115</td>
<td>1</td>
<td>11.2</td>
<td>48&quot;</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>REACH-IN FREEZER</td>
<td>1/5</td>
<td>115</td>
<td>1</td>
<td>3.7</td>
<td>86&quot;</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>3 DOOR REACH-IN REFRIGATOR</td>
<td>1/5</td>
<td>115</td>
<td>1</td>
<td>6.9</td>
<td>86&quot;</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**

**PREPARED FOR:** GARRISON ARCHITECTS
**BELLMAWR, NJ**

---

**PROJECT:** ROWAN MEDICAL CENTER CAFÉ
**GLOUCESTER COUNTY, NJ**

**DATE:** 2/6/75

---

**PROJECT NAME:**
ROWAN COLLEGE AT GLOUCESTER COUNTY
ROWAN MEDICAL CENTER

**PROJECT NUMBER:**
18-75

**DATE:** 5/6/19
STAINLESS STEEL
HAND SINKS NSF & SRA
STANDARD

Item #: 7-PS-50
Qty #: 4
Model #: 7-PS-50
Project #:

Keyhole Bracket for easier installation and greater stability.

FEATURES:
One piece Deep Bowl sink bowl design.
Sink bowl is 10" x 14" x 5".
7-PS-45 sink bowl size is 16" x 20" x 6".
7-PS-49 sink bowl size is 16" x 14" x 8".
All sink bowls have a large radius with a minimum dimension of 2" and are rectangular in design for increased capacity.
Keyhole wall mount bracket.
Stainless steel basket drain 1-1/2" IPS.

Specific Features:
7-PS-20-NF deck mounted faucet omitted.
7-PS-50 features lever operated drain and built-in overflow with plastic overflow tube and spring clamps. P-Trap is 1 1/2".
7-PS-64 features P-Trap only. P-Trap is 1 1/2".
7-PS-60 4" O.C., deck mounted centerset faucet furnished with aerator.
7-PS-50 & 7-PS-60 4" O.C. splash mounted gooseneck faucet, chrome plated & furnished with aerator.
7-PS-49 Same as above plus 2 Support Brackets (Hardware Included).
7-PS-67 features lever operated drain.
7-PS-68 4" O.C. splash mounted gooseneck faucet with Wrist Handles, chrome plated & furnished with aerator.

CONSTRUCTION:
All TIG welded.
Welded areas blended to match adjacent surfaces and to a satin finish.
Die formed Countertop Edge with a No-Drip offset.
One sheet of stainless steel - No Seams.

MATERIAL:
Heavy gauge type 304 stainless steel.
Wall mounting bracket is galvanized and of offset design.
All listings are brass / chrome plated unless otherwise indicated.

MECHANICAL:
Faucet supply is 1/2" IPS male thread hot and cold.

Standard Faucet conforms to NSF 61 Standard 9.

For Replacement Faucets & Upgrades, Drains & Accessories visit our website at www.advanceabco.com
DIMENSIONS and SPECIFICATIONS

TOL Overall: ± .500" Interior: ± .250"

FITTINGS SUPPLIED AS SHOWN

ALL DIMENSIONS ARE TYPICAL

Sink Bowl 10" x 14" x 5"

7-PS-50 & 7-PS-54
NOTE: *7-PS-54 Hand Sink Excludes Lever Drain and Overflow

7-PS-60
7-PS-68
7-PS-70

15 lbs.

7-PS-67

15 lbs.

7-PS-65

24 1/4"

7-PS-49

19 1/4"

7-PS-71 Same as 7-PS-70 with Single Hole Cutout

ADVANCE TABCO is constantly engaged in a program of improving our products. Therefore, we reserve the right to change specifications without prior notice.

© ADVANCE TABCO, AUGUST 2010

ADVANCE TABCO 200 Haartland Boulevard, Edgewood, NY 11717-8880

ASK-9 Page 10 of 58 CAFETERIA KITCHEN EQUIPMENT

Page 13 of 126
TurboChef C3 208/240 Details

Roast, broil, and brown foods at lightning-fast speeds without compromising quality, using this TurboChef C3 TC3-0605-1 high-speed electric commercial rapid cook convection microwave oven! Using a combination of microwave and impingement cooking power, this unit delivers fast, even cooking. It also boasts a spacious chamber so that you can even cook large meals!

Thanks to its internal catalytic filtration system, the C3 can operate without ventilation. This is incredibly handy for applications like airports, convenience stores, and other applications where a hood system may not be possible or ideal. It features a smart menu system that holds 128 programmed recipe settings for easy, efficient use. For added convenience, this unit comes with a collection of useful accessories to get you started! They include a wooden paddle, a bottle of oven cleaner, a bottle of oven guard, 2 trigger sprayers, (2) 12" x 12" Teflon® screens, a ceramic cooking platter, and a wave guide cap. To help ensure long-lasting performance, it features built-in self-diagnostics for component / performance monitoring. A 208/240V electrical connection is required for operation.

**Overall Dimensions:**
- Width: 24 1/2"
- Depth: 31 1/4"
- Height: 21 1/4"

**Interior Dimensions:**
- Width: 17 3/4"
- Depth: 14 1/2"  Capacity: 1.06 cu. ft.
- Height: 7 1/8"

This Item Ships via Common Carrier. For more information and tips to help your delivery go smoothly, click ASK-9 Page 11 of 58
Turbochef C3: Setting Up Your Oven

This video will help you through the process of setting up your Turbochef C3 microwave oven, which uses a combination of microwave system and stirred impinged air so it can deliver lightning fast, high quality results!

<table>
<thead>
<tr>
<th><strong>TURBOCHEF C3 208/240 SPECS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Width</strong></td>
</tr>
<tr>
<td><strong>Depth</strong></td>
</tr>
<tr>
<td><strong>Height</strong></td>
</tr>
<tr>
<td><strong>Interior Width</strong></td>
</tr>
<tr>
<td><strong>Interior Depth</strong></td>
</tr>
<tr>
<td><strong>Interior Height</strong></td>
</tr>
<tr>
<td><strong>Amps</strong></td>
</tr>
<tr>
<td><strong>Hertz</strong></td>
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<tr>
<td>Phase</td>
</tr>
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<td>---------------</td>
</tr>
<tr>
<td>Voltage</td>
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<td>Wattage</td>
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<tr>
<td>Application</td>
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<tr>
<td>Capacity</td>
</tr>
<tr>
<td>Control Type</td>
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<tr>
<td>Cooking Surface Area</td>
</tr>
<tr>
<td>Features</td>
</tr>
<tr>
<td>Heating Source</td>
</tr>
<tr>
<td>Made in America</td>
</tr>
<tr>
<td>NSF Listed</td>
</tr>
<tr>
<td>Power Type</td>
</tr>
<tr>
<td>Stackable</td>
</tr>
<tr>
<td>Type</td>
</tr>
</tbody>
</table>

**Customer questions about this product**

**Does the ventless certification on this item cover all food items?**

Ventless certification on this item does not include foods classified as "raw fatty proteins" such as bone-in, skin-on chicken, raw hamburger, raw bacon, sausage, steaks, and similar items. Please consult local HVAC ventilation regulations if you will be cooking these types of foods.

**NSF Listed**

This item meets the standards imposed by NSF International, which focuses on public safety, health, and the environment.

**Made in America**

This item was made in the United States of America.

**CE Listed**

This item complies with the standards imposed by the Conformance European (CE), a division of the Intertek group.
True TUC-24G-HC~FGD01 24" Undercounter Glass Door Refrigerator

Item: #363209    MFG: #TUC-24G-HC~FGD01

https://www.restaurantsupply.com/true-tuc-24g-hc-fgd01-24-undercounter-glass-door-refrigerator
• In Stock

FREE SHIPPING

ORDER BY NOON SHIPS SAME DAY

CALL US FOR DETAILS

$2,073.20 /Each
As low as $57/month Apply Now

1
ADD TO CART

Login or enter your email to be instantly sent the price!

Enter your email address

Send

One of our friendly Customer Service reps will be happy to give you the lowest possible price for this item! Click here for live chat, or call 888-575-9324 Mon-Thu 8am-12am, Fri 8am-8pm EST.

Warranty Info

• 3 Years Parts and Labor
• 5 Years Compressor Warranty

Description

Overall Dimensions:

Width: 24"
Depth: 24 3/4"

https://www.restaurantupply.com/true-tuc-24g-hc-fgd01-24-undercounter-glass-door-refrigerator

ASK-9 Page 15 of 58
Made In America
This item was made in the United States of America.

UL Listed
This item has been tested and meets safety standards imposed by the Underwriters Laboratories (UL).

CE Listed
This item complies with the standards by the Conformance European (CE), a division of the Intertek group.

5-15P
This unit comes with a NEMA 5-15P plug.

Not For Residential Use
Installed in a non-commercial setting will void your homeowner's insurance and the equipment manufacturer's warranty.

## Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ship Weight</td>
<td>165 LBS</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>True</td>
</tr>
<tr>
<td>Model Number</td>
<td>TUC-24G-HC-FGD01</td>
</tr>
<tr>
<td>Manufacturer Part #</td>
<td>TUC-24G-HC-FGD01</td>
</tr>
<tr>
<td>Country of Origin</td>
<td>USA</td>
</tr>
<tr>
<td>Dimensions (HxDxL)</td>
<td>32-5/8&quot; x 24&quot; x 24-3/4</td>
</tr>
<tr>
<td>Temperature</td>
<td>33°F to 38°F</td>
</tr>
<tr>
<td>Amps</td>
<td>2</td>
</tr>
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</table>

https://www.resteo.com/true-tuc-24g-hc-fgd01-24-undercounter-glass-door-refrigerator
Blendtec connoisseur 825 sound reduction blender C825C11Q-B1GB1D

Condition: New

🌟 Very Popular Item!
Our Price: $864.17

List Price: $1,522.00 (Save: 43%)

Qty: 1

Free Shipping!

If you order in the next
24 Hours 13 Minutes
we'll ship it tomorrow! (details /shipping.asp)

Add to Cart

Description

✓ Easily Handle High Volumes with Low Noise!

✓ Includes (2) WildSide Jars

✓ Maintain a quality environment for your guests
The same industry-leading power and performance yet 10 decibels quieter. Incorporating exclusive sound reduction technology, Connoisseur 825 blenders deliver all the power, speed and consistency you've come to expect with nearly half of the noise associated with normal blender operations.
Speaks softly, carries a big motor.

The Blendtec Connoisseur 825 is noticeably quieter than competitive blenders but is packed with industry-leading performance. Which means fewer limits to profitable menu offerings.
Noise? What noise?

Why drown out the ambience with an obnoxious blender? The Q-Series is quieter to operate, so your customers can enjoy the atmosphere that draws them to your shop in the first place.
Power, speed, consistency.

A powerful motor and simple, one-touch operation means the Connoisseur serves up recipes more quickly, easily and consistently than competitors' blenders.
Safety first.
An optional safety feature automatically shuts off the blender when the sound enclosure is raised. So your employees stay safe, and your business day goes off without a hitch.

PREVIOUS PART #: A1-48Q-43S

Power

- 15 Amps
- Direct Drive Motor

Controls

- No-Tend touchpad controls
- 30 pre-programmed blend cycles
- Blue LCD display counts cycles
- Solid state electronics

Dimensions

- 9" X 9" X 17"

Warranty

- 3 Years Parts & Labor - Unlimited Cycles

Weight

- 23 Pounds

Certification

- UL, NSF

Specifications

Power

- 15 Amps
- Direct Drive Motor

Controls

- No-Tend touchpad controls
- 30 pre-programmed blend cycles
- Blue LCD display counts cycles
- Solid state electronics

Dimensions

- 9" X 9" X 17"
PROJECT: Rowan Medicine Café

ITEM #: 5, 6 & 9

DESCRIPTION: SS WORK TABLE WITH 10” TRASH HOLE, 20” W SS DOOR WITH CONTINUOUS PIANO HINGE
(4) DRAWER BASE; 18” W, 20” W X 8” D SINK;
ICE STORAGE BIN WITH LID AND DRAIN 18” DEEP; SHELVES 6” SS BACKSPLASH AND “V” RAISED EDGE.

MANUFACTURER: CUSTOM FABRICATION

SIZE: 16’0”L X 32”D X 34” H

ACCESSORIES: Top 14 gauge S/S, front and ends marine rolled; 6” H splash on rear; Top where shown to have 1 compartment coved S/S sink, lever, waste, overflow, faucet; S/S legs, adj. feet. Coordinate with other equipment that will be let into the counter or is under counter. Provide shop drawing plans, sections and elevations. See ASK-9 Page 3 of 58.
From: George fiorile <geogf@icloud.com>
Sent: Tuesday, April 09, 2019 9:45 AM
To: Garrison, Brooks W.
Subject: Kratos Refrigeration 69K-770 48"W Sandwich/Salad Prep Table, 12 Pan Capacity - Central Restaurant Products

https://www.centralrestaurant.com/Kratos-Refrigeration-69K-770-48-inW-Sandwich-Salad-Prep-Table-12-Pan-Capacity-c97p540295.html?st=t=google_shopping_69K-770&gclid=EAIaIQobChMIj9KjltJLD4QIVTbOGCh2fjg2LEAQYASABEgKODfD_BwE

Questions?
(888) 539-8205

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- Contact Us
- Catalog Request
- Email Sign Up
  - MY ACCOUNT
  - VIEW CART
  - CHECKOUT

]SEARCH

ASK-9 Page 22 of 58
Specs
KRATOS

Regular Price: $1,129.00
Web Savings: -$120.10

$1,008.90 /Each

Add to Cart
Quantity: 1

51 UNITS IN STOCK
Product Details

The Kratos Refrigeration 69K-770 sandwich/salad prep table is a 48"W two door unit. This prep table has a stainless steel exterior and pre-coated aluminum interior. This model holds (12) 4"H sixth-size pans (not included). It has a 1/4 HP compressor. Self closing doors. Ventilated cooling and automatic defrost help keep food fresh. Digital temperature display is located on the outside of the unit for easy access. The Kratos Refrigeration 69K-770 sandwich/salad prep table ships same-day when in stock.

Features include:

- 48"W Two Door Sandwich/Salad Prep Table
- 13.77 cu. ft.
- Holds 4"H sixth-size pans only
- Temperature Range: +33°F to +41°F
- Voltage: 120V
- Includes (2) adjustable plastic coated steel shelves
- Casters, cord and plug included

ONE YEAR PARTS AND LABOR, FIVE YEAR COMPRESSOR WARRANTY

Additional Information

Manual

Specifications

<table>
<thead>
<tr>
<th>Central Model#</th>
<th>69K-770</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight:</td>
<td>256 lbs.</td>
</tr>
<tr>
<td>Width:</td>
<td>487/16&quot;</td>
</tr>
<tr>
<td>Depth:</td>
<td>305/16&quot;</td>
</tr>
</tbody>
</table>
Height: 457/16"
Casters / Legs: Includes (4) casters
Cord & Plug: Cord and plug included
Cu. Ft.: 13.8
Doors: 2
Exterior: Stainless steel
HP: 1/4
Interior: Precoated aluminum liner
Pan Capacity: (12) 4"H Sixth Size Pans
Shelves: 2
Temp Range: +33°F to +41°F
Voltage: 120V
Catalog Page: View on Catalog Page 15
MSDS Sheet: 69K-769-MSDS.pdf

Reviews

REVIEW SNAPSHOT®
by PowerReviews:

Not yet rated. Be the first to Write a Review

See Similar Products
Note: 47" model shown

Free Shipping

Ships free with

Contact us for pricing

Why do we do this?

Call 717-392-7472
(Mon-Thur 24 Hours, Fri 12AM-8PM EST)

https://www.webstaurantstore.com/structural-concepts-co33r-uc qs-oasis-black-36-undercounter-air-curtain-merchandiser/740CO33RUC.html

ASK-9 Page 26 of 58
✓ 32 3/4" height that fits under your counter
✓ Open design increases impulse sales
✓ Self-contained, slide out refrigeration system with microprocessor-controlled temperature sensor
✓ Bottom mount compressor: maintains temperatures of 40 degrees Fahrenheit or less
✓ Environmentally friendly EnergyWise design reduces energy consumption by more than 50%
✓ Removable deck pan for easy servicing of the evaporator coil and refrigeration connections
✓ ABS plastic tub to hold products
✓ LED top light

Shipping:
Usually Ships in 3 Business Days

White Glove Delivery
- AVAILABLE -

What is White Glove service?

View all Structural Concepts Horizontal & Vertical Air Curtain Merchandisers

Structural Concepts CO33R-UC-QS ALL BLACK Details

The Structural Concepts CO33R-UC-QS Oasis black 36" undercounter air curtain merchandiser is a great grab-and-go solution for your convenience store, coffee shop, or market! Standing at a convenient 32 3/4" height, this merchandiser can be placed under your counter to provide easy access for impulse sales. This unit maintains product temperatures of 40 degrees Fahrenheit in up to 80 degree ambient conditions, and, compared to competitor units, the environmentally-friendly EnergyWise design will reduce your energy consumption by a staggering 50% or higher, which significantly lowers operating costs.

https://www.webstaurantstore.com/structural-concepts-co33r-uc-qqs-oasis-black-36-undercounter-air-curtain-merchandiser/740CO33RUC.html

2/6

ASK-9 Page 27 of 58
Featuring an exclusive "Breeze-E" design with flexible synthetic hosing, the refrigeration system easily slides out of the unit for quick and efficient servicing. This intelligent system has a microprocessor-controlled sensor that senses and adjusts to ambient temperature conditions. This results in more consistent product temperatures and longer product shelf life! The bottom mounted compressor ensures easy maintenance and increases efficiency because it draws air from the coolest area of your establishment. Plus with removable deck pans, you'll have full access to the evaporator coils and refrigeration connections.

An ABS plastic tub comfortably houses your products, and the one-piece construction makes it easy to clean. An attractive black interior and exterior, along with full end panels with a mirrored interior help attractively showcase your products. The LED top light will illuminate your products as well, which helps to create an eye-catching display. This energy-efficient undercounter air curtain merchandiser requires a 120V electrical connection.

**Overall Dimensions:**
Width: 36 1/4"
Depth: 32 3/8"
Height: 32 3/4"

This Item Ships via Common Carrier. For more information and tips to help your delivery go smoothly, click here.

Because this item is not stocked in our warehouse, processing, transit times and stock availability will vary. If you need your items by a certain date, please contact us prior to placing your order. Expedited shipping availability may vary. We cannot guarantee that this item can be cancelled off of the order or returned once it is placed.

⚠️ **Attention CA Residents:** Prop 65 Warning ➚

<table>
<thead>
<tr>
<th>STRUCTURAL CONCEPTS CO33R-UC-QS ALL BLACK SPECS</th>
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</thead>
<tbody>
<tr>
<td>Width</td>
</tr>
<tr>
<td>Depth</td>
</tr>
<tr>
<td>Height</td>
</tr>
<tr>
<td>Amps</td>
</tr>
<tr>
<td>Hertz</td>
</tr>
<tr>
<td>Phase</td>
</tr>
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<td>Voltage</td>
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<td>Wattage</td>
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<td>Color</td>
</tr>
<tr>
<td>Compressor Location</td>
</tr>
<tr>
<td>Features</td>
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<tr>
<td>Front Style</td>
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</table>

https://www.webstaurantstore.com/structural-concepts-co33r-uc qs-oasis-black-36-undercounter-air-curtain-merchandiser/740CO33RUC.html

ASK-9 Page 28 of 58
UNIC Mira 2 Group Volumetric

Our inventory has the teflon wands and 2 programmable volumetric buttons on touchpad.

MAP: $7,493.00

Product Code: MI-2G-AV

$166.19 / month

Click Here To Apply

Call for best price!

Alternative Views:

Description Specifications Resources

Identification


<table>
<thead>
<tr>
<th>Model</th>
<th>Mira Twin</th>
</tr>
</thead>
</table>

item (13)
Since 1919, UNIC espresso has been recognized as one of the principle leaders in professional, traditional, pod-based and automatic coffee machines. Built on its experience and capacity for innovation, UNIC espresso machines combine ease of use and optimized coffee extraction. One of the factors we consider when selling espresso machines always involves considering the installation and warranty that we must provide. We will often sell UNIC machines that will be located outside of our service radius area due to the fact that they rarely have service issues.

VERSATILITY

No additional charge for the Tall Cup over Standard Cup; flexibility with the volumetric machine (i.e., touchpad configuration) at no additional charge; steam arm choices available.

TEMPERATURE STABLE

Unic's unique design makes it one of the most temperature stable heat exchange machines, which requires little to no cooling flushes.

MAINTENANCE EXPENSE

When and if needed, replacement parts for Unic machines are the most reasonably priced we have ever seen.

Using the new auto froth steam tip on the Unic Mira Espresso...
FEATURES

- 2 Programmable volumetric keys
- 30 Amp / 220 Volts
- Automated back-flushing cycle for daily cleaning
- Integrated shot timer
- 2 Teflon or stainless steel steam arm
- Steam Glide Lever on left and right side programed time
- 1 Hot water dispenser with flow regulator
- Group head mounted direct to boiler for shot temperature stability
- Cup warmer
- Stainless steel panels and steel frame
- Direct drain
- Auto refill
- Twin pressure gauge for pump and steam
- Rotary pump
- Barista group head (pre-infusion)
- Standard height

[Certification logos]

4/9/2019
<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>UNIC</th>
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<tbody>
<tr>
<td>Best Use</td>
<td>Commercial espresso machine</td>
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### Engineering

<table>
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<tr>
<th>Approvals</th>
<th>Intertec Listed c ETL us plus Intertec ETL Sanitation Listed</th>
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<tbody>
<tr>
<td>Automation</td>
<td>AV \ Auto-Volumetric</td>
</tr>
<tr>
<td>Boiler</td>
<td>Heat exchange (10 liter)</td>
</tr>
<tr>
<td>Cup Size</td>
<td>Traditional Cup</td>
</tr>
<tr>
<td>Groups</td>
<td>2 Group (Barista Group w/pre-infusion)</td>
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<tr>
<td>PID Temperature Controller</td>
<td>NA</td>
</tr>
<tr>
<td>Plumbing</td>
<td>Plumbed</td>
</tr>
<tr>
<td>Pump</td>
<td>Rotary</td>
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</table>

### Convenience / Functionality

<table>
<thead>
<tr>
<th>Display</th>
<th>Chronograph monitor of extraction times. Double pressure gauge (for boiler pressure and pump pressure).</th>
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</thead>
<tbody>
<tr>
<td>Drain Tray</td>
<td>Direct connect to water line and drain</td>
</tr>
<tr>
<td>Hot Water Spigot</td>
<td>1 Stainless steel hot water spigot</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
</tr>
<tr>
<td>Steam Arms</td>
<td>2 Stainless steel steam arms</td>
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### Dimensions

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<tr>
<th>Height</th>
<th>23.00 inches</th>
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</thead>
<tbody>
<tr>
<td>Width</td>
<td>25.00 inches</td>
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<tr>
<td>Depth</td>
<td>22.00 inches</td>
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<tr>
<td>Weight</td>
<td>122 lbs.</td>
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### Electrical

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<th>Amps \ Volts</th>
<th>30 Amps \ 220 Volts</th>
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</thead>
<tbody>
<tr>
<td>Watts</td>
<td>4500 Watt heating element</td>
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</table>

### Colors \ Options

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<thead>
<tr>
<th>Colors</th>
<th>Chrome</th>
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</thead>
<tbody>
<tr>
<td>Options</td>
<td>SteamAir Auto foam option additional $565.00</td>
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</tbody>
</table>


ASK-9 Page 32 of 58
MB36 36" Refrigerated Bakery Display Case

**Product Features**

- Internal LED Lighting
- Adjustable Temperature Control
- Adjustable Shelving
- Double Insulated Curved Glass
- Ventilated Cooling System
- Automatic-Defrost

<table>
<thead>
<tr>
<th>DIMENSIONS (WDH)</th>
<th>36&quot; x 26.6&quot; x 50.2&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEIGHT</td>
<td>360.5 lbs</td>
</tr>
<tr>
<td>SHELVES</td>
<td>2 Adjustable</td>
</tr>
<tr>
<td>SHELF SIZE (WDH)</td>
<td>31.7&quot; x 13.7&quot; x 3.3&quot; (top) 31.7&quot; x 16&quot; x 3.3&quot; (bottom)</td>
</tr>
<tr>
<td>TEMPERATURE</td>
<td>35.6°F - 46.4°F</td>
</tr>
<tr>
<td>TEMP CONTROL</td>
<td>Digital</td>
</tr>
<tr>
<td>CAPACITY</td>
<td>270L / 9.5 Cu F</td>
</tr>
<tr>
<td>ELECTRICAL</td>
<td>110V/60/1 410W</td>
</tr>
<tr>
<td>REFRIGERANT</td>
<td>R134A</td>
</tr>
<tr>
<td>PACKAGING (WDH)</td>
<td>38&quot; x 28.5&quot; x 51.6&quot;</td>
</tr>
<tr>
<td>SHIP WEIGHT</td>
<td>379.2 lbs</td>
</tr>
<tr>
<td>WARRANTY</td>
<td>1 Year Warranty</td>
</tr>
</tbody>
</table>
Marchia MB36 | 36" Refrigerated Bakery Display Case

Marchia MB36
36" Refrigerated Bakery Display Case

Price: $1,994.00

CALL 1-800-913-0115

EMAIL US / (contact)

message=Hi, I'd like your
best price on the Marchia
MB36.) FOR OUR BEST
PRICE

MB36 Product Description

MB36 Refrigerated 36" Bakery Display Case

Product Features:
- Internal LED Lighting
- Adjustable Temperature Control
- Adjustable Shelving
- Double Insulated Curved Glass
- Ventilated Cooling System
- Automatic-Defrost

Specifications:
- Capacity: 270 L / 9.5 CU. FT.
- Temperature Range: 35.6-46.4°F / 2-8°C
- Dimensions (WxDxH): 36" x 26.8" x 50.2"
- Rated Input Power: 410 W
- Refrigerant: R134a
- Electrical: 110 V / 60 Hz / 1
- WEIGHT: 360.5 lbs

Marchia USA Website [http://www.marchiausa.com/]

4/12/2019

https://www.topjetsales.com/marchia-mb36
Delfield F2936CP 36" Two Drawer Refrigerated Chef Base
Item #: 305F2936CP  MFR #: F2936CP

Free Shipping

$4,702.00
Login for details
Ships free with

Add to Cart

Wish List

Rapid Reorder

✓ Stainless steel construction with 18-gauge stainless steel top and marine edge

High density polyurethane foam insulation
2 drawers that hold a total of 4 full size, 4” deep food pans
Maintains 36 to 40 degrees Fahrenheit
Digital thermometer for easy temperature monitoring
Wall-mounted bracket to prevent tipping
Environmentally-safe R290 refrigerant
115V, 1/8 hp

Shipping:
Usually Ships in 1-2 Weeks

White Glove Delivery
- AVAILABLE -
What is White Glove service?

DELFIELD
A Welbilt Brand

View all Delfield Commercial Chef Bases

Delfield F2936CP Details

Keep refrigerated food close at hand with this Delfield F2936CP 36" two drawer refrigerated chef base! This unit increases food preparation efficiency by conveniently providing both a cooled storage area for temperature sensitive ingredients and a sturdy base to hold your cooking equipment.

This unit is made of durable stainless steel, with a sturdy top meant to preserve internal temperatures by eliminating heat transfer from your cooking equipment to the refrigerated drawers. It also features a full perimeter marine edge to collect excess water and other runoff.

Easily store refrigerated foods in the two drawers, which are capable of holding four full size pans total, keeping everything you need in one convenient location. Having refrigerated ingredients within reach makes your job easier, and keeping everything in one place makes your kitchen run more smoothly and cuts down on foot traffic.

This unit uses four 6” casters for easy mobility during routine maintenance. A 1/8 hp compressor runs on eco-friendly R290 refrigerant. This specialized refrigerant has an ozone depletion potential (ODP) of 0 and a global warming potential (GWP) of 3, making it an environmentally-responsible choice for your business. A wall-mounted bracket is included to prevent tipping.

This Delfield refrigerator base is perfect for those seeking a versatile addition to any high volume kitchen when space is at a premium. A 115V electrical connection is required.

This Item Ships via Common Carrier. For more information and tips to help your delivery go smoothly, click here.

⚠️ Attention CA Residents: Prop 65 Warning »

### DELFIELD F2936CP SPECS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Width</td>
<td>36 1/4 Inches</td>
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<tr>
<td>Depth</td>
<td>31 15/16 Inches</td>
</tr>
<tr>
<td>Height</td>
<td>26 Inches</td>
</tr>
<tr>
<td>Amps</td>
<td>2 Amps</td>
</tr>
<tr>
<td>Hertz</td>
<td>60 Hertz</td>
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<tr>
<td>Phase</td>
<td>1</td>
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<tr>
<td>Voltage</td>
<td>115</td>
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<tr>
<td>Access Type</td>
<td>Drawers</td>
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<tr>
<td>Base Style</td>
<td>Refrigerator</td>
</tr>
<tr>
<td>Capacity</td>
<td>4 Full Size Food Pans</td>
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<tr>
<td>Compressor Location</td>
<td>Side Mounted</td>
</tr>
<tr>
<td>Construction</td>
<td>Stainless Steel</td>
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<tr>
<td>Horsepower</td>
<td>1/8 HP</td>
</tr>
<tr>
<td>Made in America</td>
<td>Yes</td>
</tr>
<tr>
<td>NSF Listed</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of Drawers</td>
<td>2</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>36 - 40 Degrees F</td>
</tr>
</tbody>
</table>

Customer questions about this product

I haven't heard of R290, R600a, or R513a refrigerant before. What is it?

R290 (also known as high purity propane or CARE 40) and R600a (also known as refrigerant grade isobutane or CARE 10) are hydrocarbon refrigerants. R513a (also known as Opteon XP10) is an HFO (hydrofluorolefin) refrigerant. They are being used as an eco-friendly refrigerant by some manufacturers in response to the EPA's Significant New Alternatives Policy (SNAP) Program. Read more about this program in our blog post on Refrigerant Regulations.

Does free shipping apply to this Delfield item if I am shipping it to a residential address?

No. The manufacturer charges a $96 fee for truck deliveries to a residential address. Please contact our Customer Solutions team prior to placing your order if you have any questions.


ASK-9 Page 37 of 58
The condiment station cart allows you to divert customers from the service counter while providing a condiment station and waste receptacle. Custom finish and branding options available.
STANDARD FEATURES

CONSTRUCTION

- 12 GA aluminum doors, side panels and trim.
- 2" aluminum tube frame and uprights (powdercoat black).
- Durable woodgrain laminate side panels (color choices available).
- Corian® countertops (color choices available)
- Trash receptacle cut-out
• Cushioned composite bumpers on all four corners and length of cart
• 4 heavy duty casters

DIMENSIONS
• CART/BODY DIMENSIONS: 60” L x 30” D x 38” H
• OVERALL DIMENSIONS: 60” L x 30” D x 46” H

FEATURES
• 4 condiment container cut-outs
• Lockable stainless steel door handle and latches
• Integrated / retractable drawbar

OPTIONAL EQUIPMENT

• Custom graphics or choice of finish

Additional options are available. When requesting information, please indicate if there is any additional equipment you are interested in.

REQUEST INFORMATION

We recommend you check all state and local health department regulations prior to purchasing any mobile food cart.
BrewWISE® Dual Soft Heat®
DBC® Brewer

Features

BrewWISE Soft Heat Brewing System
- Brews 18.9 gallons (71.5 litres) of perfect coffee per hour.
- Brews ½, 1, or 1½ gallon (1.9, 3.8 or 5.7 litre) batches.
- Stores individual coffee and flavor profiles using adjustable water volume, bypass percentage, pulse brew, and pre-infusion timing.
- Operate any combination of BrewWISE equipment error-free with wireless brewer-grinder interface via Smart Funnel®.
- Reduce accidents with safety features that decrease hot splashes from funnel, eliminate brewing when funnel or server is not present.
- Troubleshoot all switches and electrical components from the front panel with advanced diagnostic service tools.
- Energy saver mode reduces tank temperature during idle periods.
- Simplify installation and calibration by creating your own recipe cards and dedicated funnels with the BrewWISE Recipe Writer using your PC (Windows® compatible).
- International electrical configurations available.

Dual SH DBC with
1.5 gallon SH Servers
(servers sold separately)
Dimensions: 35.8" H x 18" W x 21.2" D
(90.9cm H x 45.7cm W x 53.8cm D)

For current specification sheets and other information, go to www.bunn.com.

Related Products

Easy Clear® EQHP-25L
Product No.: 39000.0002

Easy Clear® EQHP-25
Product No.: 39000.0005

BrewWISE® Recipe Writer (BRW)
Product No.: 34444.0000

Recipe Card
Product No.: 34447.0000
• Program a recipe to be used on brewer or grinder.

Ad Card
Product No.: 34448.0000
• Program a message to appear on the brewer’s display.

Single/Dual Filter Pack
Product No.: 20138.0000
Packed per case: 500
Dimensions:
5¼" Base x 4¾" Sidewall
13.3 cm Base x 10.8 cm Sidewall

Two Position Drip Tray
Product No.: 27150.0000

SH Server
Product No.: 27850.0001

2SH Stand
Product No.: 27875.0000

MHG
Product No.: 35600.0000

G9-2T DBC
Product No.: 33700.0000
### Dimensions & Specifications

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<thead>
<tr>
<th>Model</th>
<th>Product #</th>
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<th>Amps</th>
<th>Tank Heater Watts</th>
<th>Total Watts</th>
<th>Capacity</th>
<th>Cubic Measure</th>
<th>Shipping Weight</th>
<th>Cord</th>
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<td>33500.0000</td>
<td>120/240</td>
<td>29.1</td>
<td>2@3300</td>
<td>6800</td>
<td>18.9 gal/hr</td>
<td>13.3 ft³</td>
<td>90 lbs.</td>
<td>No</td>
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<td>120/240</td>
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<td>2@3300</td>
<td>6800</td>
<td>18.9 gal/hr</td>
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<td>90 lbs.</td>
<td>No</td>
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<td>120/240</td>
<td>29.1</td>
<td>2@3300</td>
<td>6800</td>
<td>18.9 gal/hr</td>
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<td>90 lbs.</td>
<td>No</td>
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<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>1.9 gal.</td>
<td>2.4 ft³</td>
<td>17 lbs.</td>
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<td>SH Server*†(1.5 gal.)</td>
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<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>1.9 gal.</td>
<td>2.4 ft³</td>
<td>17 lbs.</td>
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<td>1SH Stand</td>
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<td>1SH Stand*</td>
<td>27825.0004</td>
<td>120</td>
<td>.8</td>
<td>n/a</td>
<td>90</td>
<td>1 SH Server</td>
<td>1.2 ft³</td>
<td>13 lbs.</td>
<td>Yes</td>
</tr>
<tr>
<td>2SH Stand</td>
<td>27875.0000</td>
<td>120</td>
<td>1.5</td>
<td>n/a</td>
<td>180</td>
<td>2 SH Servers</td>
<td>2.1 ft³</td>
<td>22 lbs.</td>
<td>Yes</td>
</tr>
<tr>
<td>2SH Stand*</td>
<td>27875.0003</td>
<td>120</td>
<td>1.5</td>
<td>n/a</td>
<td>180</td>
<td>2 SH Servers</td>
<td>2.1 ft³</td>
<td>22 lbs.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* Models have black finish.
† Model has lower faucet.

**Note:** Soft Heat® Brewers and Servers are boxed and shipped separately.

**Brewing capacity:** Based upon incoming water temp of 60°F/15°C (140°F/60°C rise).

Models listed as 120/208V or 120/240V must be connected to 208V or 240V electrical service respectively. Please refer to the installation manual.

---

**Electrical:** Brewer is 3-wires plus ground service rated 120/240V, single phase, 50/60Hz.

**Plumbing:** 20-90 psi (138-621 kPa). Machine supplied with ¼” male fitting. Tank capacity: 8.4 gallons (31.8 L)
Plug your MiraLink into the HDMI port of any TV or CATV modulator, and connect all of your screens to the Internet. Just upload, drag and drop. Our online dashboard allows anyone to easily create rich multimedia playlists and schedule them across multiple screens.

“Mira Screen Signage is the most versatile, and the easiest of all the digital signage companies to get up and running.”

Billy Martin, The Grind Houston

Managing screens has never been easier.

Mira takes the design work out of creating professional content. Our apps let you create announcements, menus, calendars, & more, without moving a single pixel.

https://www.getmira.com/
Drag-and-drop to upload images and videos

Mira is the fastest way to get content onto your screens. Already have Images or Videos ready to go? Just drag-and-drop to upload and they'll be on display in seconds.

Mira gives us the total control over an easy to operate GUI and almost idiot proof hardware.

Ian Mohammed, Track 21 Indoor Karting

https://www.getmira.com/
Why choose Mira?

Mira makes signage a no-brainer, so you can focus on running your business.

😊 We're here to help
Our support team is happy to answer any questions, and is available for personal email-support during business hours.

💰 30-day money back guarantee
If you're not 100% satisfied with Mira, let us know and we'll issue you a full refund up to 30 days into your contract.

🔄 Loop playlists all the time
Add as much content as you want to each device. It will loop continuously until you decide to make a change.

✈️ Control your screens from anywhere
Once your MiraLinks are connected to the internet, you can instantly update your screens from anywhere.

📅 Instant, flexible scheduling
Schedule one-time or repeating events to override your default playlist for a specific period of time.

🔍 Supports major file types
Mira supports all of the major image and video formats (png, jpg, gif, mov, mp4 & more). Our devices cache content locally to help you save on your internet bill.

🚀 Continuous product improvements
We have a dedicated team of world class engineers who are constantly working on building new apps and features. You'll see Mira evolve and improve right before your eyes!

🔎 Top tier security
Mira uses in-transit and at-rest encryption to ensure the security of your content. We're happy to answer any questions about how we keep your data safe.

https://www.getmira.com/

4/11/2019
SPECLINE 14 Ga. Fabricated Sinks™
Triple Compartments

<table>
<thead>
<tr>
<th>MODEL #</th>
<th>Length</th>
<th>Width</th>
<th>Bowl Size A &amp; B</th>
<th>Dbsd. Length</th>
<th># of Dbsd.</th>
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<th>C.</th>
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<td>26&quot;</td>
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<td>None</td>
<td>R &amp; L</td>
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<td>R &amp; L</td>
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<td>31</td>
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<td>30&quot;</td>
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<td>None</td>
<td>R &amp; L</td>
<td>139 lbs</td>
<td>44</td>
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<td>R &amp; L</td>
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<td>R &amp; L</td>
<td>170 lbs</td>
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<td>R &amp; L</td>
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<td>2</td>
<td>R &amp; L</td>
<td>310 lbs</td>
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<tr>
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<td>R &amp; L</td>
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<td>R &amp; L</td>
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<td>None</td>
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<td>98.5&quot;</td>
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<td>24&quot; x 24&quot;</td>
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<td>R &amp; L</td>
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<td>R &amp; L</td>
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<td>2</td>
<td>R &amp; L</td>
<td>405 lbs</td>
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<td>None</td>
<td>R &amp; L</td>
<td>240 lbs</td>
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<td>FS-3-3024-24RL</td>
<td>117&quot;</td>
<td>30&quot;</td>
<td>24&quot; x 24&quot;</td>
<td>24&quot;</td>
<td>1</td>
<td>R &amp; L</td>
<td>450 lbs</td>
<td>59</td>
</tr>
<tr>
<td>FS-3-3024-36RL</td>
<td>123&quot;</td>
<td>30&quot;</td>
<td>36&quot;</td>
<td>30&quot;</td>
<td>1</td>
<td>R &amp; L</td>
<td>510 lbs</td>
<td>62</td>
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<td>FS-3-3024-36RL</td>
<td>144&quot;</td>
<td>30&quot;</td>
<td>36&quot; x 30&quot;</td>
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<td>1</td>
<td>R &amp; L</td>
<td>540 lbs</td>
<td>65</td>
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<td>FS-3-3024</td>
<td>95&quot;</td>
<td>30&quot;</td>
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<td>0</td>
<td>None</td>
<td>R &amp; L</td>
<td>240 lbs</td>
<td>38</td>
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<tr>
<td>FS-3-3024-24RL</td>
<td>117&quot;</td>
<td>30&quot;</td>
<td>24&quot;</td>
<td>24&quot;</td>
<td>1</td>
<td>R &amp; L</td>
<td>450 lbs</td>
<td>59</td>
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<td>FS-3-3024-36RL</td>
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<td>30&quot;</td>
<td>36&quot;</td>
<td>30&quot;</td>
<td>1</td>
<td>R &amp; L</td>
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<td>36&quot;</td>
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<td>2</td>
<td>R &amp; L</td>
<td>535 lbs</td>
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<td>36&quot; x 30&quot;</td>
<td>36&quot;</td>
<td>2</td>
<td>R &amp; L</td>
<td>590 lbs</td>
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<td>R &amp; L</td>
<td>290 lbs</td>
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<td>24&quot;</td>
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<td>R &amp; L</td>
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<td>36&quot;</td>
<td>36&quot;</td>
<td>2</td>
<td>R &amp; L</td>
<td>680 lbs</td>
<td>86</td>
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</tbody>
</table>

† Requires Two Faucets

---

FEATURES:

- Full Skirt Design
- Backsplash has long edge for ease of installation.
- Sink bowls are 3/4" coved corner and meet NSF requirements.
- Rolled rim edge for additional strength.
- Sink Bowls are 14" deep for greater capacity.
- Stainless Steel Gutter and Cross Bracing.

CONSTRUCTION:

- All TIG welded.
- Welded areas blended to match adjacent surfaces and to a satin finish.

MATERIAL:

- 1 5/8" diameter stainless steel legs with 1 adjustable stainless steel bullet feet.
- Entire unit is 14 gauge 304 stainless steel.
- Stainless Steel Gutter and Cross Bracing.

MECHANICAL:

- Supply is 1/2" IPS hot & cold.
- Faucet holes on 8 centers.
- Faucets are not included (see accessories)
- Waste drains are 1 1/2" IPS S/S basket type located in center of sink bowl and are included.
Advance Tabco K-245-X Details

Keep your janitorial closet organized with this Advance Tabco K-245 mop sink utility shelf with 2-mop hanger. Each wall mounted shelf features three convenient storage hooks. Hang beside your mop sink for easy access to all of your supplies and safe, sanitary drying of your mops.

**Overall Dimensions:**
- Width: 24" 
- Depth: 8" 

⚠️ Attention CA Residents: Prop 65 Warning ➔

---


ASK-9 Page 47 of 58
iT0420 Ice Cube Machine

Models

- IDT0420A
- IYT0420A
- IDT0420W
- IYT0420W

Designed for operators who know that ice is critical to their business, the Indigo NXT Series ice machine's preventative diagnostics continually monitor itself for reliable ice production. Improvements in cleanliness and programmability make your ice machine easy to own and less expensive to operate.

- **New Levels of Performance** - Showcasing an average of 41% lower energy consumption, 21% reduction in in-potable water usage and a 34% reduction in condenser water usage. This translates into lower cost of ownership over the life of your machine.
- **easyTouch® Display** - New icon based touch screen takes the guess work out of owning and operating an ice machine.
- **Programmable Ice Production** - Now its super easy to program your ice machine to be off at certain times of the day to save money with fluctuating electrical rates. Also programmable by daily ice production volume.
- **Easy to Clean Foodzone** - Hinge front door swing out for easy access. Removable water-rough, distribution tube, curtain, water probe and water pump for fast and efficient cleaning. Selected components are made with Alphasan® antimicrobial.
- **Intelligent Diagnostics** - Provides 24 hour preventative maintenance and diagnostic feedback for trouble free operation.
- **Acoustical Ice Sensing Probe** - Unique patented technology allows for reliable operation in challenging water conditions and environments.
- **DuraTech® Exterior** - Provides superior corrosion resistant above stainless steel. Innovative clear-coat resists fingerprints and dirt making it easier to keep clean.
- **Available Luminice® II Growth Inhibitor** - Controls the growth of bacteria and yeast within the Food zone keeping the machine cleaner longer. A new indicator in the display keeps you abreast of the operational status.

**Ice Machine Electric**

- 115/60/1 standard (208-230/60/1 also available)
- Minimum circuit amperage:
  - Air-cooled: 11.3, 115v, 5.5 - 208-230v
  - Water-cooled: 10.6, 115v, 5.2 - 208-230v
- Maximum fuse size:
  - Air-cooled: 15 1ph
  - Water-cooled: 15 1ph

**Specifications**

- **BTU Per Hour:** 3,800 (average), and 6,000 (peak)
- **Refrigerant:** R410A CFS - Free
- **Operating Limits:**
  - Ambient Temperature Range: 40° to 110° F (4.4° to 43.3°C)
  - Water Temperature Range: 40° to 90° F (4.4° to 32.2°C)
  - Water Pressure Ice Maker
    - Water In: Min. 20 psi (137.9 kPA)
    - Max. 80 psi (551.1 kPA)

**Ice Shape**

- **Half Dice**
  - ¾" x 1¼" x ¾" (19 x 32 x 19 mm)
- **Dice**
  - ⅛" x ⅛" x ⅛" (2 x 2 x 2 cm)

2110 South 26th Street
Manitowoc, WI 54220

Tel: 1.920.682.0161
Fax: 1.920.683.7589

www.manitowocice.com
Indigo® NXT™ iT0420 Ice Cube Machine

iTO420 on D-320 Storage Bin

Space-Saving Design

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Ice Shape</th>
<th>Ice Production 24 Hours</th>
<th>Power Usage kWh/100 lbs. @90°F/70°F</th>
<th>Potable Water Usage/100 lbs. 45.4 kgs. of Ice</th>
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<td>IDT0420A</td>
<td>dice</td>
<td>470 lbs. 375 lbs.</td>
<td>5.6 *</td>
<td>19 Gal.</td>
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<td></td>
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<td>72 L</td>
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<td>IW0420A</td>
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<td>19 Gal.</td>
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<td>209 lbs. 170 kgs.</td>
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<td>72 L</td>
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<td>IDT0420W</td>
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<td>454 lbs. 400 lbs.</td>
<td>4.28</td>
<td>19 Gal.</td>
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<td>72 L</td>
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<td>IW0420W</td>
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<td>490 lbs. 425 lbs.</td>
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<td>19 Gal.</td>
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<tr>
<td></td>
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<td>222 lbs. 193 kgs.</td>
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<td>72 L</td>
</tr>
</tbody>
</table>

* Water-cooled Condenser Water Usage / 100 lbs. /45.4 kgs. Of ice: 140 gal/ 530 L.
* Water-cooled models are excluded from ENERGY STAR qualification.

Order separately: Ice storage bin for all units

Accessories

Luminate® II Growth Inhibitor reduces yeast and bacteria growth for a cleaner ice machine.

External Scoop holder Protects the ice scoop with the NSF approved versatile scoop holder.

Arctic Pure® Water Filters Reduces sediment and chlorine odors for better tasting ice.

IAUCS® schedules and performs routine ice machine cleaning automatically.

Welsbilt reserves the right to make changes to the design or specifications without prior notice.

2110 South 26th Street
Manitowoc, WI 54220
Tel: 1.920.682.0161
Fax: 1.920.683.7589
www.manitowocice.com

6468 01/18

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True T-19FZ-HC 27" Single Section Reach-In Freezer w/ (1) Right Hinge Solid Door, 115v

The True T-19FZ-HC reach-in freezer maintains a temperature of 0 degrees Fahrenheit, and staff members can monitor it with an external display. The temperature stays cool with R290 hydrocarbon refrigerant that runs through a capillary tube system. To protect the evaporator, an epoxy coating is applied to it. Evaporator and condenser fans move air consistently to reduce heat. Since the condensing unit is mounted on the bottom, it is in the coolest area of the kitchen.

With a stainless steel floor and aluminum liner, the interior of the True T-19FZ-HC reach-in freezer is resistant to scratches, dents, and corrosion. Polyurethane insulation is foamed in place to provide structure and retain cold air. A black, powder-coated frame rail also adds stability and is mounted with castors for mobility. Inside the cabinet, product sits on three adjustable shelves that are coated in PVC for corrosion resistance. The stainless steel door has a recessed handle and lock.

Product Details
- Door and front are made of stainless steel to resist corrosion
- 21/2-in.-dia. castors provide mobility
- Self-closing door keeps cold air in the cabinet
- Right-hinged door opens on the left
- Door lock restricts product access
- Recessed door handle prevents injury
- Removable magnetic door gasket is easy to clean and replace
- Foamed-in-place polyurethane insulation keeps cold air inside cabinet
- Large or small products fit in the unit since the 3 PVC-coated shelves are adjustable in 1/2-in. increments
- Visibility is created in the cabinet by LED interior lights
- Corrosion-resistant aluminum interior liner
- Easy-to-clean stainless steel interior floor
- Structure is added by the black powder-coated frame
- NSF/ANSI Standard 7 compliant for open food product
- cULus and UL-EPH listed
- Made with innovation in the U.S.

Product Features

Self-contained Refrigeration System
- R290 hydrocarbon refrigerant runs through a capillary tube system to maintain cool temperatures
- Maintains 0 degrees F
- External temperature display
- Consistent volume of air is moved by the evaporator and condenser fans
- Easily service the unit since it has a bottom-mounted condensing unit
- Epoxy-coated evaporator is resistant to corrosion

**Dimensions & Utilities**

- Shelves: 22 7/8 in. W x 18 1/4 in. D
- Overall: 27 in. W x 24 1/2 in. D x 78 1/2 in. H
- 3.7 A, 1/2 HP
- 115 V/60 Hz/1 ph, 9-ft. cord with a NEMA 5-15P plug

Need more information on one-section reach-ins? Take a look at our reach-in freezers buyers' guide.

Freezer, Reach-in, 0° F, one-section, stainless steel door, stainless steel front, aluminum sides, aluminum interior with stainless steel floor, (3) adjustable PVC-coated wire shelves, interior lighting, 2-1/2" castors, R290 Hydrocarbon refrigerant, 1/2 HP, 115v/60/1, 3.7 amps, NEMA 5-15P, cULus, UL EPH Classified, MADE IN USA

*The warranty will not be honored for residential or non-commercial use of any Commercial Equipment.

⚠️Important Prop 65 information for California residents.

**True Refrigeration T-19FZ-HC Specifications**

<table>
<thead>
<tr>
<th>PDF Spec Sheet</th>
<th>True Refrigeration</th>
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</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>T-19FZ, TRUT19FZ, 890T19FZ, T-19FZ, TRUE T-19FZ, 675-214</td>
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<tr>
<td>Also Known As</td>
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<tr>
<td>Sections</td>
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<td>Shelving Type</td>
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</table>
Interior Material  Aluminum
Supports  Casters
Thermometer Type  Dial
Warranty  3 years parts & labor/5 year compressor
Phase  1
Hertz  60
Voltage  115
Product  Reach-In Freezer
Product Type  Commercial Refrigeration
Cubic Feet Range  10 - 25
Width (in) Range  16 - 32
Made in USA  Yes
Rating  Better
Weight  250.00

True T-19FZ-HC Certifications

True Refrigeration T-19FZ-HC Customer Reviews

George Fiorile
President/CEO
www.5diamonddevelopment.com
302-363-6951
"Relationships Matter"

5 Diamond Development
True T-72 Reach-In Refrigerator, 3 Door, 72 Cu. Ft.

*T 72 designed with enduring quality to protect your investment*

Central Model#: 675-003 Brand: True (search?keyword=True&brand=True) Mfg Part#: T-72-HC
(search?keyword=True&brand=True)

Email/Login for Details ()

Your Cost:
$5,125.45 /Each
FREE SHIPPING

Quantity:

1

Add to Cart

11 UNITS IN STOCK
Order in the next 8 hours and 7 minutes and this product ships today!

Live Chat

Send a Question ()

Request a complimentary quote ()

(faq)

Product Details

The True T-72-HC Reach-In Refrigerator features a durable, stainless steel interior, a gasketed & insulated lid, an adjustable temperature control, and a bright, high output incandescent light. This True reach-in refrigerator is designed with only the highest quality components and materials.

https://www.centralrestaurant.com/True-T-72-Reach-In-Refrigerator-3-Door-T-72-Cu-Ft-c86p3245.html?itl=google_shopping_675-003&gclid=EAIaIQobChMI9c3q0_Nq5wIVwv6yDu0q3Ae7EAYYASABEAIABD8QABvJAgEAIABD8QAQ...
Central Restaurant Products.

Dimensions:
- Weight: 615 lbs.
- Width: 78\(\frac{3}{8}\)"
- Depth: 29\(\frac{1}{2}\)"
- Height: 84\(\frac{1}{8}\)" (with the included 5" casters)

Main Specifications:
- Bottom mounted ½ HP Compressor
- Voltage: 120V
- Capacity: 72 Cu. Ft.
- Temperature Range: 33°F to 38°F
- Door Type: Full
- 9' Cord with 5-15P NEMA Plug (Included)
- UL, NSF and CE Listed

THREE YEAR PARTS AND LABOR
FIVE YEAR COMPRESSOR WARRANTY

Product ranks 1 out of 20 in Reach In Refrig - Three Doors.

Additional Information

[Link to Warranty]

Specifications

<table>
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<th>Central Model#</th>
<th>675-003</th>
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<td>Doors:</td>
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<tr>
<td>Exterior:</td>
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</tbody>
</table>

What other information would you like to see on this page?

Please type here...
HP: \( \frac{1}{2} \)

Interior: Aluminum with stainless steel floor

Size: 78\( \frac{1}{6} \)"W

Temp Range: +33°F to +38°F

Type: Reach-In

Voltage: 120V

Compressor: Bottom mounted

Catalog Page: View on Catalog Page 1
(https://assets.centralrestaurant.com/pdfs/catalog/1.pdf)

Frequently Asked Questions

What are the advantages of a bottom mount refrigeration system?

The compressor performs in the coolest, most grease-free area of the kitchen for best operation and easily serviced condensing unit.

Does this have UL sanitation certification?

Reviews

**REVIEW SNAPSHOT® by**
PowerReviews

Not yet rated. Be the first to Write a Review
(https://www.centralrestaurant.com/writeareview.html?pr_page_id=3245)
Stainless Steel Wire Shelving Unit - 48 x 18 x 63" H-5472 - Uline

Mobile Stainless Steel Wire Shelving Unit - 48 x 18 x 63"

Twice the price and well worth it. Strong, durable and absolutely will not rust.

- Used in hospitals, labs and restaurants.
- Type 304 stainless steel withstands the harshest environments.
- Open wire maximizes airflow, reduces dirt and dust buildup.
- Shelves adjust in 1" increments.
- NSF certified.
- Optional 5" stainless steel Swivel Stem Casters add 6" to height.
- Additional Shelves available.

<table>
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<tr>
<th>MODEL NO.</th>
<th>DIMENSIONS W x D x H</th>
<th>NO. OF SHELVES</th>
<th>SHELF CAP. (lbs.)</th>
<th>PRICE EACH</th>
<th>WT. (lbs.)</th>
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</table>

https://www.uline.com/Product/Detail/H-5472/Wire-Shelving/Stainless-Steel-Wire-Shelv... 4/11/2019
PART I  GENERAL

1.01  SCOPE

1. This Contractor is not responsible for testing & balancing. The owner will be hiring under a separate contract an independent TAB Contractor to perform testing and balancing. See Section 15950 for balancing and to be performed by balancing contractor.

2. The Owner's Commissioning Agent will provide the following.
   A. Prepare commissioning plan.
   B. Conduct periodic commissioning meetings with mechanical contractor.
   C. Perform periodic inspections of work in progress and major equipment upon delivery to jobsite.
   D. Oversee mechanical commissioning.
   E. Witness equipment manufacturers on site startup for all equipment.
   F. Prepare functional test procedures for mechanical equipment, sub-systems and systems.
   G. Witness functional testing of mechanical equipment, sub-systems and systems.
   H. Prepare commissioning report.
   I. Prepare mechanical test and balance (TAB) plan.
   J. Perform mechanical TAB.
   K. Prepare TAB report.
   L. Review operations and maintenance manuals.

3. This Contractor is responsible for the following work related to mechanical commissioning.
   A. Cooperate with commissioning agent and Owner on commissioning and TAB activities. Refer to Sections 01650 and 15995 for additional mechanical contractor responsibilities related to the commissioning process. This Contractor is required to provide a qualified, dedicated project superintendent (on-site) who will cooperate with the commissioning agent, coordinate contractors work with the work of the commissioning agent and assist with the mechanical commissioning.

   B. Prepare detailed project schedule (for mechanical work) fourteen (14) days after notice to proceed. Solicit input from commissioning agent and incorporate commissioning agent's review comments. Mechanical contractor's project schedule must be approved prior to approval of the second payment application. This Contractor's mechanical project schedule shall specifically include:
      1. Phased completion dates for periodic inspections.
      2. Manufacturers startup milestone dates.
      3. ATC system operational testing.
      5. Functional testing of equipment, systems and sub-systems.
C. Provide all labor and equipment in order to operate systems and equipment while they are being tested and balanced (test and balance equipment, and actual testing will be provided by the commissioning agent).

D. Attend periodic commissioning meetings with commissioning agent and owner.

E. Perform and document manufacturer's startup procedures for mechanical equipment.

F. Perform and document functional test procedures for mechanical equipment, subsystems and systems.

G. Provide and document training for major mechanical equipment and systems.

H. Prepare operations and maintenance manuals.

END OF SECTION
15190.5801
SECTION 15950 - TESTING AND BALANCING – ADDED PER ADDENDUM #1

FURNISHED BY OWNER

PART I GENERAL

1.01 SCOPE

1. The Owner is to contract separately with an independent certified testing and balancing to perform all balancing and testing.

2. Provide all materials and miscellaneous items as required to perform all testing and balancing of all air and water systems.

3. Where there are conflicts with work specified in this section with other sections of the specification, this section shall take precedent. This section is presented to provide criteria for how balancing is to be done. This section is not intended to define scope of work by other trades.

1.02 APPROVALS

1. All work to be done in accordance with the following:


1.03 TESTING AND BALANCING

1. Adjust all air systems to provide the air volume quantities indicated and sound levels required. Accomplish all work in accordance with the agenda and procedures specified and AABC 71679 and standards of the NEBB.

1.04 AGENCY QUALIFICATIONS

1. The Commissioning Agent shall obtain the services of a qualified testing organization to perform the testing and balancing work. Prior to commencing work the testing organization shall have been approved by the Owner/Construction Manager.

2. The criteria for determining qualifications shall be membership in the AABC, or certification by the NEBB.

1.06 PROCEDURES, GENERAL

1. Method of application of instrumentation shall be in accordance with the approved agenda.
SECTION 15950 - TESTING AND BALANCING – ADDED PER ADDENDUM #1

FURNISHED BY OWNER

2. Instruments used for measurements shall be accurate. Calibration of each test instrument shall be by an approved laboratory or by the manufacturer. The engineer has the right to request instrument recalibration, where accuracy of readings is questionable.

3. Comply with manufacturer's certified instructions.

4. The Commissioning Agent shall instruct the mechanical contractor to not install permanently-installed equipment for the tests, e.g. gauges, thermometers, etc., until just prior to the tests to avoid damage and changes in calibration.

PART 2 EXECUTION

2.01 AIR SYSTEMS GENERAL REQUIREMENTS

1. All systems shall be balanced to provide air flow rates measured and adjusted to within 7.5% of the design rates. Provide a typed or computer-generated balance report using standard AABC forms and industry accepted practices for presentation. Where conditions do not allow for system to achieve the specified values, is to be clearly indicated prior to submission of balance report as a separate professionally prepared industry standard form.

2. Review of Documents - It shall be the responsibility of the Commissioning Agent and the balancing contractor to thoroughly review the design drawings prior to submission of shop drawings and indicate where there may be possible problems with accessibility to equipment to allow for proper balancing or where system design will not allow for proper balancing and provide written description of possible problems. The Commissioning Agent shall review pipe and sheet metal shop drawings and shall provide written confirmation that this has been done. Coordinate with the mechanical contractor for locations of all volume control devices. Where volume control devices are required for proper balancing of the system, they shall be provided by mechanical contractor at no additional cost to owner.

3. Air systems shall be balanced in a manner which shall first minimize throttling losses, then fan speed shall be adjusted to meet design flow conditions.

4. After completion to tests, adjustments and balancing under minimum fresh air conditions, set the system for maximum fresh air. Repeat the total CFM tests as specified above to check field versus design conditions. The results under maximum fresh air cycle shall agree with conditions found under “minimum fresh air operation” before the system is considered to be in balance. Adjustments of the proper dampers shall be made to achieve balance.

5. The system shall be commissioned as specified and all balancing shall be done in accordance with the time schedule as specified in General Conditions.

2.02 AIR SYSTEM PROCEDURES

1. Adjust all air handling systems to provide the required design air quantity to, or through, each component.

2. Adjust equalizing devices to provide uniform velocity across the inlets.
3. Use flow adjusting (volume control) devices to balance air quantities only.

4. Balancing between runs (sub mains, branch mains, and branches): Use flow regulating devices at, or in, the divided - flow fitting.

5. Final Measurement of Air Quantity: Make final measurements of air quantity, after the air terminal has been adjusted to provide the optimum air patterns of diffusion.

6. Fan Adjustment: Total air system quantities, generally, shall be varied by adjustment of fan speeds.

7. Except as specifically indicated herein, make pitot tube traverses of each duct to measure air flow therein.

8. Pitot tube traverse may be omitted if the duct serves only a single room or space and its design volume is less than 2000 cfm.

9. Where duct's design velocity and air quantity are both less than 1000 (fpm/cfm), air quantity may be determined by measurements at terminals served.

10. Test holes, shall be in a straight duct, as far as possible downstream from elbows, bends, take-offs, and other turbulence generating devices.

11. Air Terminal balancing: Measurement of flow rates by means of velocity meters applied to individual terminals, shall be used only for balancing. Measurement of air quantities at each type of air terminal (inlet and outlet) shall be determined by the method approved for balancing agenda.

12. The volume dampers, splitters and deflectors shall be adjusted so that the air velocities and volume will be as specified.

13. A further balance shall be made on temperature basis to maintain uniformity throughout, if so directed.

14. With the fan supply set to handle normal minimum outdoor air, the balancing firm shall perform the following tests and compile the following information:

A. Air Handling Equipment:

1. Design Conditions:
   a. CFM Supply Air
   b. Static Pressure
   c. Motor H.P.
   d. CFM Fresh Air
   e. Fan R.P.M.
2. Installed Equipment:
   a. Manufacturer
   b. Size/Model Number
   c. Motor HP, Voltage, Phase, Full Load Amperes

3. Field Test:
   a. Fan Speed
   b. No Load Operating Amperes
   c. Fan Motor Operating Amperes
   d. Calculated BHP

4. Test for Total Air:
   a. Size of discharge, return air, and outside air ducts.
   b. Number and locations of velocity readings taken and static pressure readings taken.
   c. Duct Average Velocity
   d. Total C.F.M.
   e. Outside air C.F.M.
   f. Return air C.F.M.

B. Individual Outlets (diffusers, registers and/or grilles):
   1. Identify each outlet or inlet as to location area and fan system, outlet, manufacturer, and type, outlet size, free area, core area, or neck area, required FPM and test velocity and CFM and test results.

2.03 SOUND TEST PROCEDURES

1. Tests to demonstrate compliances with sound requirements shall be made at each selection point included in the agenda.

2. Take sound level measurements at times when the building is unoccupied. Take measurements with all equipment secured. Measure sound levels at any point within a room not less than 6 feet from an air terminal or room unit, and not closer than 3 feet from any floor, wall, or ceiling surface.

3. Measure sound levels with a sound meter complying with the latest ANSI S1.4. Use the "A" scale to measure overall sound level. To determine the specified octave band levels, the above sound levels meter, set on "C" scale, shall be supplemented by an Octave Band Analyzer complying with ANSI S1.11.

4. Determine "equipment components" of room sound (noise) levels for each (of eight) octave bands as follows:
   A. Measure room sound pressure level "LP " with equipment to be tested shut off.
B. Measure room sound pressure level "LP" with equipment to be tested turned on.

C. Calculate LP; If this value is less than one, applicable test must be rerun with lower background level (LP) unless LP is within sound pressure level specified for equipment.

D. Determine "C" from table below:

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<th>LPt - LPb (db)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4-4.5</th>
<th>5-5-1/2</th>
<th>6-7-1/2</th>
<th>8-12</th>
<th>over 12</th>
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<td>(db)</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>1.5</td>
<td>1</td>
<td>1/2</td>
<td>0</td>
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E. The "equipment component" of room sound level equals LPt-C.

END OF SECTION
15950.5801
SECTION 15995 – MECHANICAL: FACILITY START-UP/COMMISSIONING – ADDED PER ADDENDUM #1

PART 1-GENERAL

1.01 SCOPE OF THE WORK

1. The purpose of this section is to specify Division 15 responsibilities and participation in the commissioning process. See Section 01650 for a detailed list of the responsibilities of all parties.

2. Commissioning is the responsibility of the contractor (including subcontractors and vendors), the Owner, the Owner’s Commissioning Agent, the Design Professional and the Construction Manager. The attached “Commissioning Responsibility Matrix” in Section 01650 lists the responsibilities for various parties involved in Commissioning. Parties having primary responsibility are identified with a “1”; parties having secondary (or support) responsibilities are identified with a “2”. The commissioning process requires Division 15 participation to ensure all portions of the work have been completed in a satisfactory and fully operational manner.

3. Work of Division 15 includes:

   A. Start-Up and testing of the mechanical equipment and systems.
   B. Assistance in testing, adjusting, and balancing.
   C. Operating equipment and systems as required for commissioning tests.
   D. Providing qualified personnel for participation in commissioning.
   E. Providing equipment, materials, and labor necessary to correct deficiencies found during the commissioning process, which fulfill contract warranty requirements.
   F. Providing equipment submittals, operation and maintenance information and as-built drawings.
   G. Providing training for the systems specified in this Division.
   H. Coordinating all other Division 15 work with the Commissioning schedule.
   I. Provide completed pre-functional checklists and factory supplied startup documentation to the CA before functional testing.

1.02 RELATED WORK

1. All start-up and testing procedures and documentation requirements specified within Division 15.

2. This Contractor shall cooperate with the Commissioning Agent in the following manner:
   A. Allow sufficient time before final commissioning dates so that testing, adjusting and balancing can be accomplished.

   B. Put all heating, ventilating, and air conditioning equipment and systems into full operation and continue the operation during each working day of testing, adjusting and balancing and commissioning.

   C. Provide labor and material to make corrections when required, without undue delay.

   D. Include the cost for parts and labor of exchanging sheaves and belts, as may be, required by the TAB firm.
E. Provide test holes in ducts and plenums where directed or necessary for pitot tubes to take air measurements and to balance the air systems. Test holes shall be provided with an approved removable plug or seal. At each location where ducts or plenums are insulated, test holes shall be provided with an approved extension with plug fitting per NEEB and AABC requirements.

F. Provide pressure and temperature taps as indicated on construction documents in locations as required by the TAB firms to adequately test and/or balance the hydronic systems.

G. The Commissioning Agent is responsible for testing, adjusting and balancing (TAB). See Specification Section 01650 - General, Facility Startup/Commissioning of Mechanical Systems.

1.03 PHASING

1. The project is to be completed in multiple phases (see General Requirements for description).

2. Facility commissioning/start-up shall be done for each phase.

3. Where systems and/or equipment provided under Phase 1 serves Phase 2, these systems shall be rebalanced after Phase 2 completion.

4. It is the intent of the design that upon completion of the work in each phase, that the systems be tested and balanced.

PART 2 – PRODUCTS

2.01 TEST EQUIPMENT

1. Provide test equipment as necessary for start-up and commissioning of the mechanical equipment and systems. The TAB firm will provide the test equipment required to perform their service.

2.02 TEST EQUIPMENT – PROPRIETARY

1. Proprietary test equipment required by the mechanical equipment manufacturer, whether specified or not, shall be provided by the manufacturer of the equipment. Manufacturer shall demonstrate its use, and assist this contractor in the commissioning process, also see Section 15010.

2. Identify the proprietary test equipment required in the test procedures submittals and in a separate list of equipment to be included in the operations and maintenance manuals.
SECTION 15995 – MECHANICAL: FACILITY START-UP/COMMISSIONING – ADDED PER ADDENDUM #1

PART 3- EXECUTION

3.01 WORK PRIOR TO COMMISSIONING

1. This contractor shall complete all phases of work so the system can be started, tested, adjusted, balanced, and otherwise commissioned. This contractor has primary start-up responsibilities with obligations to complete systems, including all sub-systems so they are fully functional. This includes the complete installation of all equipment, materials, pipe, duct, wire, insulation, controls, etc., per the contract documents and related directives, clarifications, change orders, etc.

2. A commissioning plan will be developed by the Owners' Commissioning Agent with input from Mechanical Contractor. This Contractor shall assist in the preparation of the commissioning plan by providing necessary information pertaining to the actual equipment and installation. Equipment modifications made in order to meet contractual performance requirements will be made at no additional cost to the Owner.

3. Specific pre-commissioning responsibilities within Division 15 are as follows:

A. Factory start-up services for the following items, but not limited to, equipment (as specified throughout Division 15) and as indicated below:

   1. HVAC equipment
   2. Heating equipment
   3. Exhaust systems
   4. Direct expansion cooling systems
   5. Building management systems

B. Manufacturer’s field start-up services required to bring each system into a fully operational state. This includes cleaning, filling, purging, leak testing, motor rotation check, control sequences of operation, full and part load performance, etc. Division 15 contractor shall submit manufacturer’s field startup procedures for review by the Design Professional and Commissioning Agent.

3.02 PARTICIPATION IN COMMISSIONING

1. This contractor shall provide skilled technicians to start up all systems within Division 15. These same technicians shall be made available to assist the Owner’s Commissioning Agent in completing the commissioning program as it relates to each system and their technical specialty. Work schedules, time required for testing, etc., will be requested and coordinated by this Contractor. Division 15 contractor(s) will ensure that the qualified technician(s) are available and present during the agreed upon schedules and for sufficient duration to complete the necessary tests, adjustment, and/or problem resolutions.

2. System problems and discrepancies may require additional technician time. The additional technician time shall be made available for the subsequent commissioning periods until the required system performance is obtained at no additional cost to Owner.
3. Before system start-up begins, conduct a final installation verification audit. This Contractor shall be responsible for completion of all work including change orders and punch list items to the satisfaction of the Owners' Commissioning Agent and/or construction manager. The audit shall include, but not be limited to, a check of:

A. Piping specialties including balance, control, and isolation valves.
B. Ductwork specialty items including turning devices; balance, fire, smoke and control dampers; and access doors.
C. Control sensor types and locations
D. Identification of piping, valves, starters, gauges, and thermometers, etc.
E. Documentation of prestart-up test performed, including manufacturer's factory tests.
F. Accessibility to equipment in 1-3 above.

4. If any work is found to be incomplete, inaccessible, incorrect, or non-functional, make note of deficiencies and correct deficiencies before system start-up work proceeds.

3.03 WORK TO RESOLVE DEFICIENCIES

1. In some systems, maladjustments, misapplied equipment and/or deficient performance under varying loads will result in additional work being required to commission the systems. This work will be completed under the direction of the Owner's Commissioning Agent and the Design Professional. Whereas all members will have input and the opportunity to discuss the work and resolve problems, the Design Professional will have final jurisdiction on the necessary work to be done to achieve performance.

2. Corrective work shall be completed in a timely fashion to permit timely completion of the commissioning process. Experimentation to render system performance will be permitted.

3.04 SEASONAL COMMISSIONING AND OCCUPANCY VARIATIONS

1. Seasonal commissioning pertains to testing under full-load conditions during peak heating and peak cooling seasons, as well as part-load conditions in the spring and fall. Initial commissioning will be done as soon as contract work is completed regardless of the season. Subsequent commissioning may be undertaken at any time thereafter to ascertain adequate performance during the different seasons. Commissioning under conditions representing other than the current season may be undertaken at a later time by the Owner's Commissioning Agent wherein the contractor will be expected to participate. Discrepancies discovered with the contractor's equipment or workmanship will be handled as warranty items.

2. All equipment and systems will be tested and commissioned in a peak season to observe full-load performance. Cooling equipment will be tested during summer design extremes, with a fully occupied building. Mechanical contractor and each supplier will be responsible to participate in the initial and the alternate peak season test of the systems required to demonstrate performance; as scheduled by this contractor, with three day (minimum) advance notification.

3. Commissioning may be required under conditions of minimum and/or maximum occupancy or use. All equipment and systems affected by occupancy variations will be tested and commissioned at the minimum and peak loads to observe system performance. This
contractor will be responsible to participate in the occupancy sensitive testing of systems to provide verification of adequate performance. If such occupancy is not available within the contract period related commissioning may be undertaken at a later time by the Owner's Commissioning Agent, wherein this contractor will be expected to participate. Discrepancies discovered with this contractor's equipment or workmanship will be handled as warranty items.

3.05 RETESTING AND RECOMMISSIONING

1. Any fault in material or in any part of the installation revealed by commissioning test shall be investigated, replaced or repaired by this contractor and the same test repeated at this contractor's expense until no faults appear.

3.06 TRAINING

1. Participate in the training of the owner's staff, as required in Divisions 1 and 15, on each system and related components. Mechanical Contractor shall provide a training syllabus for review by the Owner's Commissioning Agent and the Design Professional.

2. Training will be conducted jointly by this contractor, the design engineers, and the equipment vendors. This contractor will be responsible for highlighting system peculiarities specific to this project.

3.07 SYSTEMS DOCUMENTATION

1. Refer to “as-built” documentation requirements in Divisions 1 and 15. Continuous and regular red-lining of drawings is considered essential and mandatory.

3.08 MISCELLANEOUS SUPPORT

1. Division 15 contractor(s) shall remove and replace covers of mechanical equipment, open access panels, etc., to permit the Owner's Commissioning agent to observe equipment and controllers provided. Furnish ladders and flash lights as necessary.

END OF SECTION
15995.5801