

PERFORMANCE SPECIFICATIONS

ROOM DESCRIPTION	TEMPERATURE RANGE	TEMPERATURE CONTROL	HUMIDITY RANGE	HUMIDITY CONTROL
CONTROLLED ENVIRONMENT ROOM	0°C to +60°C	+/- 0.2°C	10% to 95% rh	+/- 3% rh
STABILITY CHAMBER	+25°C	+/- 0.2°C	60% rh	+/- 4% rh
STABILITY CHAMBER	+30°C	+/- 0.2°C	60% to 65% rh	+/- 4% rh
STABILITY CHAMBER	+40°C	+/- 0.2°C	75% rh	+/- 4% rh
STABILITY CHAMBER	+25°C	+/- 0.2°C	Less than 40% rh	+/- 4% rh
CLINICAL COLD ROOM	+4°C	+/- 0.2°C	Not required	-----
BIO-COLD ROOM	+2°C to +10°C	+/- 0.2°C	Not required	-----
ARCHIVE STORAGE	+2°C	+/- 0.2°C	25% rh	+/- 4% rh
INCUBATOR	0°C to +37°C	+/- 0.2°C	Not required	-----
INCUBATOR	0°C to +37°C	+/- 0.2°C	10% to 95% rh	+/- 4% rh
FREEZER	0°C to -20°C	+/- 0.5°C	Not required	-----
FREEZER	-20°C to -40°C	+/- 0.5°C	Not required	-----
ANIMAL HOLDING ROOM	+10°C to +30°C	+/- 0.2°C	65% to 85% rh	+/- 4% rh
UNIFORMITY TOLERANCE				
TEMPERATURE UNIFORMITY	<input type="checkbox"/> +/- 2.0°C	<input type="checkbox"/> +/- 1.5°C	<input type="checkbox"/> +/- 1.0°C	<input type="checkbox"/> +/- 0.5°C
RELATIVE HUMIDITY UNIFORMITY	<input type="checkbox"/> +/- 5% rh	<input type="checkbox"/> +/- 4% rh	<input type="checkbox"/> +/- 3% rh	-----

❖ The performance specifications are nominal and conform to industry standards. For application at conditions beyond these specifications, contact Can-Trol Environmental Systems Limited.

STANDARD SIZES

NOMINAL Imperial (ft-in)	ACTUAL		NOMINAL Imperial (ft-in)	ACTUAL	
	Imperial (ft-in)	Metric (mm)		Imperial (ft-in)	Metric (mm)
4' - 0"	3' - 11 1/8"	1197	4' - 6"	4' - 5"	1346
5' - 0"	4' - 10 7/8"	1495	5' - 6"	5' - 4 3/4"	1645
6' - 0"	5' - 10 5/8"	1794	6' - 6"	6' - 4 1/2"	1943
7' - 0"	6' - 10 1/2"	2095	7' - 6"	7' - 4 3/8"	2245
8' - 0"	7' - 10 1/4"	2394	8' - 6"	8' - 4 1/8"	2543
9' - 0"	8' - 10"	2692	9' - 6"	9' - 3 7/8"	2842
10' - 0"	9' - 9 3/4"	2991	10' - 6"	10' - 3 5/8"	3140
11' - 0"	10' - 9 5/8"	3292	11' - 6"	11' - 3 1/2"	3442
12' - 0"	11' - 9 3/8"	3591	12' - 6"	12' - 3 1/4"	3740
13' - 0"	12' - 9 1/8"	3889	13' - 6"	13' - 3"	4039
14' - 0"	13' - 9"	4191	14' - 6"	14' - 2 3/4"	4337
15' - 0"	14' - 8 3/4"	4489	15' - 6"	15' - 2 5/8"	4639
16' - 0"	15' - 8 1/2"	4788	16' - 6"	16' - 2 3/8"	4937
17' - 0"	16' - 8 1/4"	5086	17' - 6"	17' - 2 1/8"	5236
18' - 0"	17' - 8"	5385	18' - 6"	18' - 2"	5537
19' - 0"	18' - 7 7/8"	5686	19' - 6"	19' - 1 3/4"	5836
20' - 0"	19' - 7 5/8"	5985	20' - 6"	20' - 1 1/2"	6134
21' - 0"	20' - 7 3/8"	6283	21' - 6"	21' - 1 1/4"	6433
22' - 0"	21' - 7 1/8"	6582	22' - 6"	22' - 1"	6731
23' - 0"	22' - 7"	6883	23' - 6"	23' - 0 7/8"	7033
24' - 0"	23' - 6 3/4"	7182	24' - 6"	24' - 0 5/8"	7331
25' - 0"	24' - 6 1/2"	7480	25' - 6"	25' - 0 3/8"	7630
26' - 0"	25' - 6 1/4"	7779	26' - 6"	26' - 0 1/8"	7928
27' - 0"	26' - 6 1/8"	8080	27' - 6"	27' - 0"	8230
28' - 0"	27' - 5 7/8"	8379	28' - 6"	27' - 11 3/4"	8528
29' - 0"	28' - 5 5/8"	8677	29' - 6"	28' - 11 1/2"	8827
30' - 0"	29' - 5 1/2"	8979	30' - 6"	29' - 11 1/4"	9125

❖ Standard overall height = 7' - 6" (2286 mm) and 8' - 6" (2590 mm)
 ❖ Custom heights and sizes available

OPTIONS

CONSTRUCTION

Panel Insulation

- 3" (76mm) thick foamed-in-place CFC-free urethane insulation
- 4" (102mm) thick foamed-in-place CFC-free urethane insulation
- 5" (127mm) thick foamed-in-place CFC-free urethane insulation

Approvals

- | | |
|---|---|
| <input type="checkbox"/> UL-723 (ASTM-E84) | <input type="checkbox"/> CAN/ULC-S102 |
| <input type="checkbox"/> UL Sanitation NSF1 7 | <input type="checkbox"/> CAN/ULC-S101 |
| <input type="checkbox"/> ULC/ORD-C376 | <input type="checkbox"/> Factory Mutual |

Panel Finish - Wall And Ceiling Panels

- Baked white enamel on galvanized steel
- Smooth aluminum
- Embossed aluminum
- Stainless steel, Various types available
- ❖ **Specify metal thickness required**
- ❖ **Specify both interior and exterior finishes**

Wall Panel - Reinforcement

- 18 gauge galvanized steel backing
- 3/8" plywood backing

Insulated Floor - Finish

- Galvanized steel
- Aluminum rice pattern
- Stainless steel
- Altro safety flooring on water proof plywood
- ❖ **Specify metal thickness required**

Insulated Floor - Reinforcement

- 3/8" plywood backing
- Foamed glass insulated reinforcing blocks
- 3/16" aluminum tread plate, installed over standard floor
- 1/4" stainless steel tread plate, installed over standard floor

Entrance Door

- Flush mount door (30") (34") (36") wide x (78") (84") high
- Overlap door (36") (42") (48") wide x (78") (84") high
- Manual sliding door: Custom sizes available

Entrance Door - Optional Equipment

- 15" x 20" Viewing window
- Polished chrome hardware
- Brushed chrome hardware
- 36" high stainless steel kickplate, Interior and exterior available
- Interior ramp, Same width as door opening and 24" in length
- Exterior ramp
- Glass display door: Custom sizes available
- Foot treadle
- ❖ **Specify freezer or cooler application**

Lighting

- Vapourproof fluorescent fixture with 32 watt T-8 cool white lamps
- Vapourproof incandescent fixture with 100 watt lamp

Receptacle

- Receptacle in surface mounted PVC junction box and conduit
- Receptacle in recessed "FS" box and PVC conduit
- Receptacle in surface mounted raceway
- ❖ **Specify type of receptacle and amperage rating required**

Filler Panel

- Horizontal enclosure panels
- Vertical filler panels
- Stainless steel corner guards
- Stainless steel wall bumpers

CONTROL PANEL

Control

- | | | |
|---|--------------|----------------|
| <input type="checkbox"/> Temperature | Range: _____ | Control: _____ |
| <input type="checkbox"/> Relative humidity | Range: _____ | Control: _____ |
| <input type="checkbox"/> RS485 Communications | | |
| <input type="checkbox"/> 4-20 mA Retransmission | | |
| <input type="checkbox"/> Defrost control | | |
| <input type="checkbox"/> Programmable profile control | | |

Chart recorder

- Single pen, temperature only
- Dual pen, temperature and relative humidity

Alarm System - Annunciation

- Local audible/Visual temperature alarm
- Local audible/Visual temperature and relative humidity alarm
- Dry contacts for remote monitoring
- Personnel Emergency Alarm

Alarm System - Safety

- Independent high temperature limit
- Independent low temperature limit
- High humidity cut-out
- Redundant refrigeration system

EQUIPMENT

Refrigeration System - Condensing Unit

- Water-cooled
- Indoor air-cooled
- Outdoor air-cooled

Compressor Type

- Hermetic
- Semi-hermetic
- Scroll

Refrigerant Type

- R404A
- R134a
- R22

❖ **Maximum recommended refrigeration pipe run 100 feet**

Refrigeration System - Fan Coil Unit

- Single flow, interior ceiling mounted
- Dual flow, interior ceiling mounted
- Custom plenum

Humidification System

- Electric steam generating humidifier for deionized water
- Electric steam generating humidifier for city water
- Atomizing spray nozzles
- Centrifugal atomizer

Dehumidification System

- Desiccant type dehumidifier
- Dehumidifying with refrigeration and adding electric reheat

Air Distribution Ceiling Plenum

- Aluminum T-bar grid with acrylic egg crate panels
- Aluminum T-bar grid with perforated aluminum panels

SHELVING

Shelving Type

- Free standing shelving
- Mobile shelving and carts
- Wall mounted shelving
- High density shelving

Shelving Finish/Material

- Chrome plated
- Epoxy coated
- Stainless steel
- Polymer

ACCESSORIES

- | | |
|---|--|
| <input type="checkbox"/> Stainless steel benching | <input type="checkbox"/> Viewing window |
| <input type="checkbox"/> Stainless steel sinks | <input type="checkbox"/> Perforated flooring |
| <input type="checkbox"/> Deck mount fitments | <input type="checkbox"/> Vinyl floor matting |
| <input type="checkbox"/> PVC ports with cap | <input type="checkbox"/> PVC floor screeds |

Can-Trol Environmental Systems Limited

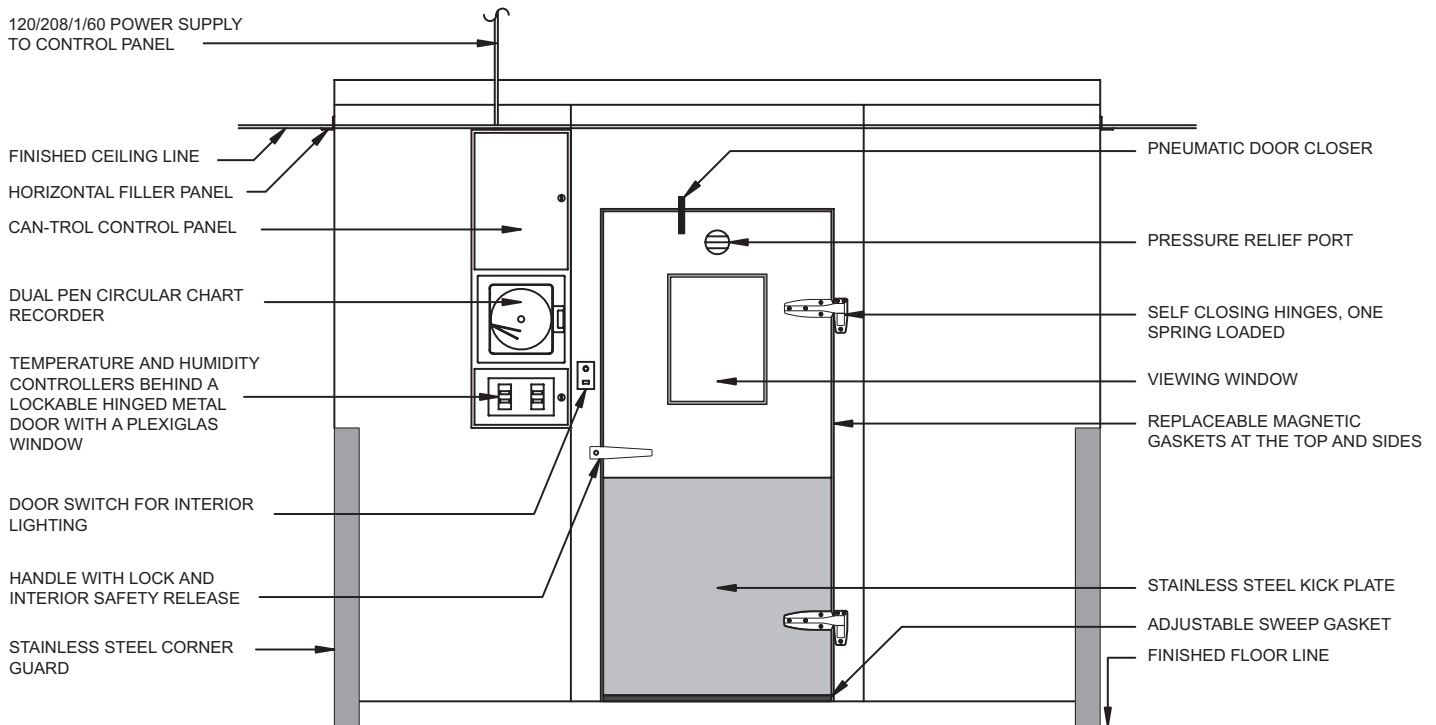
391 Steelcase Road West, Unit 22 Markham, Ontario. L3R 3V9
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CONTROLLED ENVIRONMENT ROOMS

- ▲ All Temperature & Humidity Ranges
- ▲ Microprocessor Controlled
- ▲ Testing of Unduplicated Quality
- ▲ Built for Your Exact Requirements

ARCHITECTURAL FEATURES



SPECIFICATIONS

CONSTRUCTION

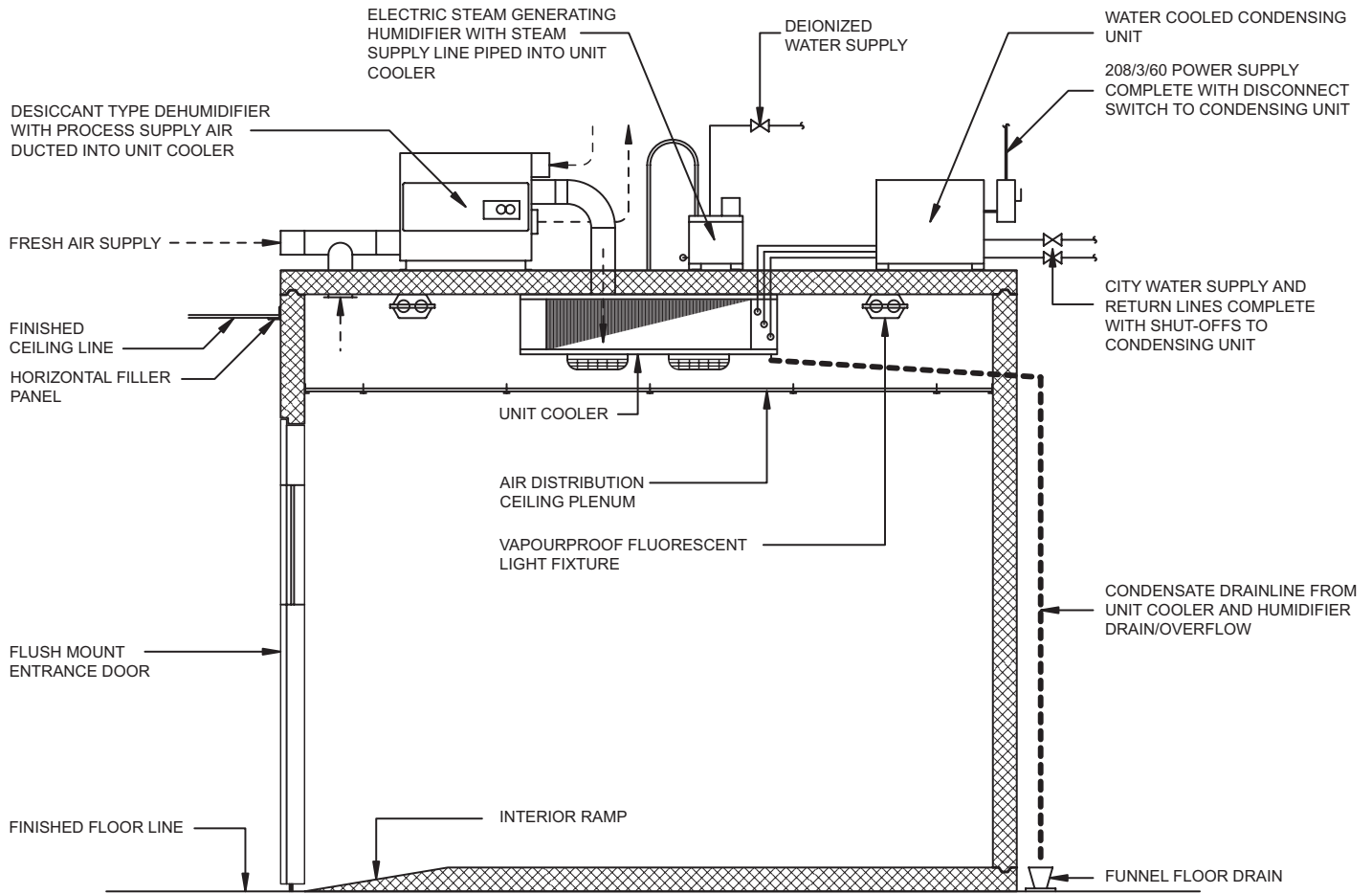
PANEL INSULATION:	4" THICK FOAMED-IN-PLACE URETHANE INSULATION
APPROVALS:	NSF (UL SANITATION)
PANEL FINISH:	BAKED WHITE ENAMEL ON 24 GAUGE GALVANIZED STEEL. INTERIOR AND EXTERIOR WALL AND CEILING PANELS
INSULATED FLOOR:	18 GAUGE GALVANIZED STEEL
ENTRANCE DOOR:	36" X 78" FLUSH MOUNTED DOOR
• VIEWING WINDOW:	15" X 20" NON HEATED WINDOW
• HARDWARE:	CHROME PLATED
• KICKPLATE:	36" HIGH STAINLESS STEEL INTERIOR AND EXTERIOR
LIGHTING:	VAPOURPROOF FLUORESCENT FIXTURES
FILLER PANELS:	SAME FINISH AS EXTERIOR WALL PANELS. AS REQUIRED

CAN-TROL CONTROL PANEL

ENCLOSURE:	15 1/2" X 48" X 7" DEEP, BAKED WHITE ENAMEL ON STEEL
TEMPERATURE CONTROLLER:	1/8 DIN MICROPROCESSOR BASED. RTD TEMPERATURE SENSOR
HUMIDITY CONTROLLER:	1/8 DIN MICROPROCESSOR BASED. THIN-FILM POLYMER SENSOR
CHART RECORDER:	10" DIAMETER, 7-DAY, DUAL PEN, TEMPERATURE AND HUMIDITY
ALARM SYSTEM:	AUDIBLE-VISUAL TEMPERATURE ALARM
• REMOTE:	DRY CONTACTS FOR REMOTE MONITORING
• SAFETY LIMITS:	INDEPENDENT HIGH/LOW TEMPERATURE LIMIT CONTROLS
ELECTRICAL:	120/208/1/60 3-WIRE POWER SUPPLY

SEE REVERSE FOR COMPLETE LIST OF OPTIONS

CONDITIONING SYSTEMS



SPECIFICATIONS

EQUIPMENT

REFRIGERATION SYSTEM

o CONDENSING UNIT

- ELECTRICAL
- MECHANICAL

WATER-COOLED, R404A HERMETIC CONDENSING UNIT. TOP MOUNTED
208/3/60 POWER SUPPLY REQUIRED
CITY WATER SUPPLY AND RETURN

o FAN COIL UNIT

- ELECTRICAL
- MECHANICAL

CEILING MOUNTED, DUAL AIRFLOW, WITH DIRECT EXPANSION COIL
120/1/60 POWER SUPPLY FED FROM CONTROL PANEL
SUITABLE DRAIN FOR CONDENSATE REQUIRED ADJACENT TO ROOM

HUMIDIFICATION SYSTEM

- ELECTRICAL
- MECHANICAL

ELECTRIC STEAM GENERATING HUMIDIFIER
208/1/60 POWER SUPPLY FED FROM CONTROL PANEL
DEIONIZED OR REVERSE OSMOSIS WATER SUPPLY REQUIRED
SUITABLE DRAIN FOR CONDENSATE AND OVER FLOW REQUIRED ADJACENT TO ROOM

DEHUMIDIFICATION SYSTEM

- ELECTRICAL
- MECHANICAL

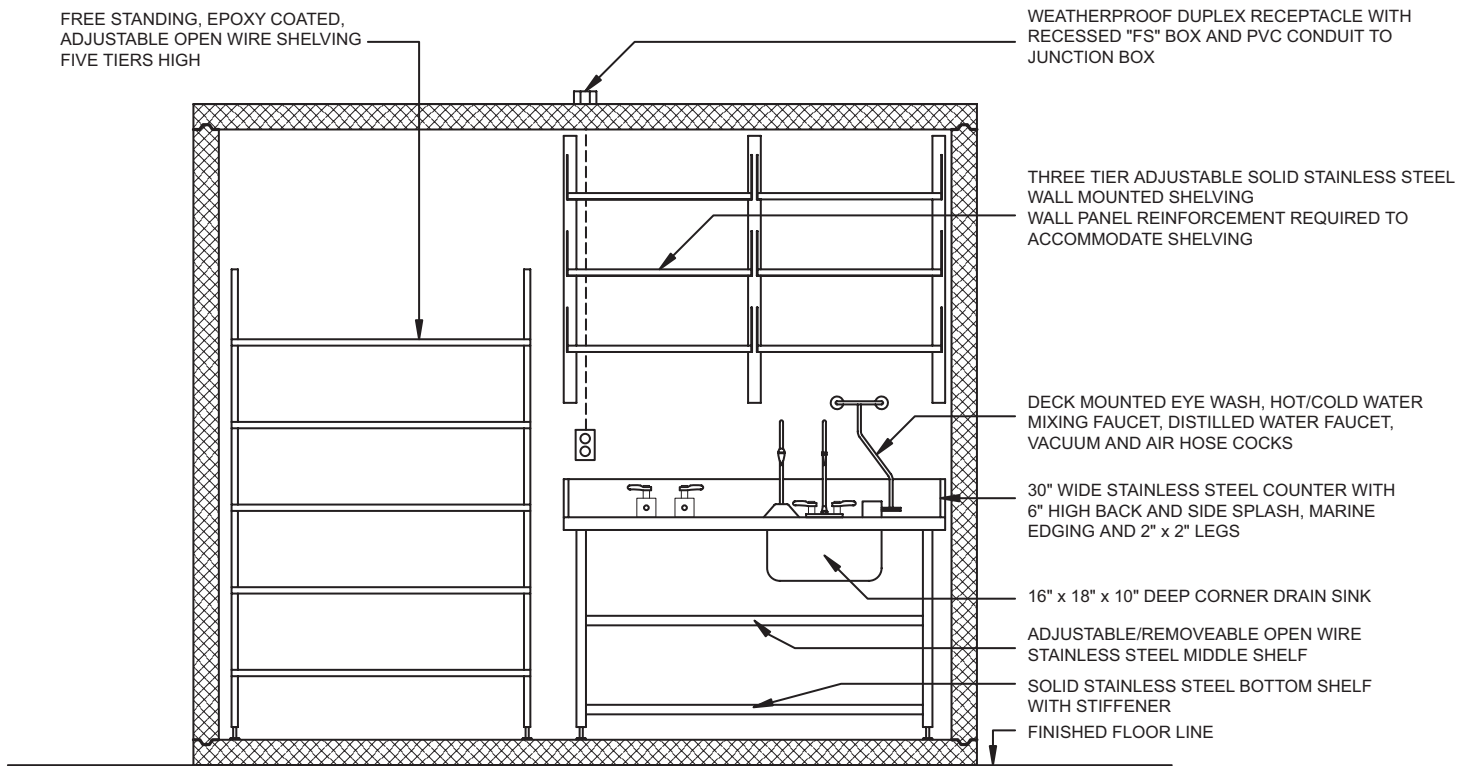
DESICCANT TYPE DEHUMIDIFIER
208/1/60 POWER SUPPLY FED FROM CONTROL PANEL
FRESH AIR SUPPLY DUCTED TO PROCESS RETURN. IF REQUIRED
REACTIVATION AIR OUTLET AIR DUCTED TO BUILDING EXHAUST SYSTEM. IF REQUIRED

AIR DISTRIBUTION CEILING PLENUM

ALUMINUM TEE-BAR CEILING GRID, WITH WASHABLE EGG CRATE ACRYLIC PANELS

SEE REVERSE FOR COMPLETE LIST OF OPTIONS

LABORATORY ACCESSORIES



SPECIFICATIONS

ACCESSORIES

FREE STANDING SHELVING	FREE STANDING, EPOXY COATED, ADJUSTABLE OPEN WIRE SHELVING, FIVE TIERS HIGH
WALL MOUNTED SHELVING	ADJUSTABLE SOLID STAINLESS STEEL SHELVING MOUNTED ON DOUBLE SLOTTED WALL STANDARDS, THREE TIERS HIGH
BENCH	30" WIDE STAINLESS STEEL COUNTER WITH 6" HIGH BACK AND SIDE SPLASH, MARINE EDGING AND 2" x 2" LEGS
• BOTTOM SHELF	SOLID STAINLESS STEEL SHELF WITH STIFFENER
• MIDDLE SHELF	ADJUSTABLE/REMOVABLE OPEN WIRE STAINLESS STEEL SHELF
• STAINLESS STEEL SINK	16" x 18" x 10" DEEP CORNER DRAIN SINK
• DECK MOUNT FITMENTS	EYE WASH, SINGLE ACTION PULL DOWN HOT/COLD WATER MIXING FAUCET WITH GOOSENECK DISTILLED WATER FAUCET WITH GOOSENECK BALL VALVE HOSE COCK FOR VACUUM AND AIR
RECEPTACLE	15 AMP 120/1/60 WEATHERPROOF DUPLEX RECEPTACLE WITH RECESSED "FS" BOX AND PVC CONDUIT TO A JUNCTION BOX ON TOP OF ROOM
WALL PANEL REINFORCEMENT	18 GAUGE GALVANIZED STEEL BACKING

SEE REVERSE FOR COMPLETE LIST OF OPTIONS

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