HALLSELL HALL REROOF & REFRESH

PROJECT NUMBER: 2379-22

ITB #2022-008136

ADDENDUM NO. 1

ISSUE DATE: April 13, 2022

CONTRACT ADMINISTRATOR:
Brooke Davison, Construction Contract Officer
Construction Contracts Administration
Email: ConstructionContracts@oregonstate.edu

This Addendum is hereby issued to inform you of the following revisions and or clarifications to the above-referenced ITB and/or the Contract Documents for the Project, to the extent they have been modified herein. Any conflict or inconsistency between this Addendum and the Solicitation Document or any previous addenda will be resolved in favor of this Addendum. Bids shall conform to this Addendum. Unless specifically changed by this Addendum, all other requirements, terms and conditions of the Solicitation Document and or Contract Documents, and any previous addenda, remain unchanged and can be modified only in writing by OSU. The following changes are hereby made:

DRAWINGS:

Item Sheet A2.1 – REVISE as specified in the attached sheet. Additional details provided in RS A2.1 related to mechanical and electrical rooms.

SUBSTITUTION REQUESTS:

Item 2 Air-Shield SMP in place of Perm A Barrier VPS is accepted. Product data sheet attached.

CLARIFICATIONS:

Item 3 It is anticipated that most of the plywood subfloor is in useable condition, and that the three-pass flooring preparation will allow for new flooring to be installed. Contractor shall include in their bid an allowance for 350 square feet (+/- 11 sheets of 3/8" plywood underlayment) for each of the upper three floors. Any additional required underlayment replacement will be by Change Order to the Contract.

Item 4 Finish schedule for first floor lobby space is still being completed. Contractor shall:
1. Protect existing flooring. It will remain.

2. Remove tackboards, display boards, signage, fixtures, and fittings.
3. Remove existing wainscots.
4. Patch and prep walls for new wainscots and new paint.
5. New wainscots will be installed under a Change Order process, when the materials have been selected.

Item 5 **Q:** Water Heater cut sheet is attached to this Addendum. It is an AO Smith DES-120A-75 120 gallon water heater.

A: 1. The unit is 208 volt, 75kw, 3 phase.
2. Provide 1-inch conduit, with (5) #6 conductors from MDA to water heater.
3. Existing electrical system is Square D. Distribution Assembly is QED.
4. Provide new subpanel for water heater at switch wall in mechanical room.
5. Building will be off-line during construction. Coordinate power shutoffs with Owner. Provide minimum 72-hour notice.

Item 6 **Q:** Water heater plumbing connections as described.

A: 1. Provide valved connection to existing 2" copper pipe at WH-2. Connections are to be copper, with ball valve, pipe union, and concentric reducer to fit to 1-1/4" NPT at water heater outlet. Provide ball valve and balancing valve copper connections to existing hot water return piping to fit to 1-1/4" NPT inlet at base of water heater. Provide pipe to drain for connection to ¾" NPT relief valve opening. Copper piping shall be hard drawn Type L, with cast bronze or wrought copper class 150 lb. socket solder fittings. All hot water and hot water return piping shall be insulated.

Item 7 **Q:** The building will be largely unoccupied during the scope of this work.

A: 1. Two ground floor apartments for the Professional live-in staff may be occupied as work proceeds. Replacement flooring for these units is not included in the scope of this ITB. Units are 108 and 117 for reference.

2. Scheduling of the flooring replacement is anticipated to be one-half of one floor at a time. For instance, furniture will be moved out of half of the units across the hall while the flooring is replaced. After the flooring replacement is complete the furniture will be moved back across the hall to allow for the other half of the floor to receive the flooring installation.

<u>QUESTIONS:</u>

Item 8 **Q:** Can the drawings be reprinted from CAD to be searchable in BlueBeam?

A: No.

Item 9 **Q:** Will interior areas with construction need public/student/staff access through the area or will activity in the building be confined to the outside areas?

A: The building will be closed to students and the public. Owner (UHDS) staff will access the facility to manage routine maintenance not included within the scope of this ITB. There will be residential conferences in adjacent facilities throughout construction and a secure site will be required. The two staff apartments off the first floor lobby will remain occupied throughout duration of the summer. These spaces can be accessed from the interior or exterior of the facility and can be coordinated during construction.

Item 10 **Q:** Will bidders be given enough time to walk the building during the mandatory site walk to be able to 'verify all dimensions and quantities'?

A: Contractors had access to all public/common spaces during the walk and on typical residential suite. Documents should be sufficient for bidding activities.

Item 11 **Q:** Is the water heater install a replacement of existing or new?

A: New/additional heater to support facility during steam outages.

Item 12 **Q:** Will the rooms be empty prior to construction?

A: The rooms will be empty at the start of construction. The only items remaining will be furnishings to be moved by separate contractor. Moving services is not contemplated in the scope of this ITB.

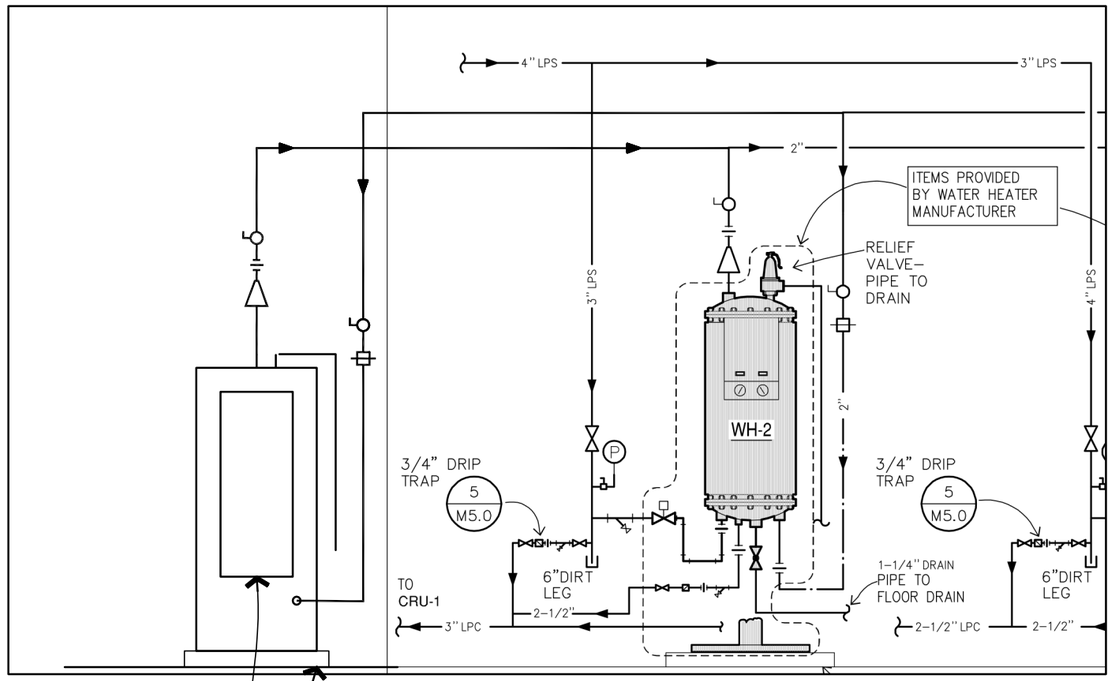
Item 13 **Q:** With the bottom of the room heaters being close or closer to the floor than the 6" called out for the new rubber base, what is the expected finish condition of this under these heaters and at the bottom corners?

A: 6" base is trimmed as necessary to fit under the heaters.

Item 14 **Q:** Is there a requirement for what kind of window blinds to use?

A: Window blinds are not part of the scope of this ITB.

END OF ADDENDUM NO. 1

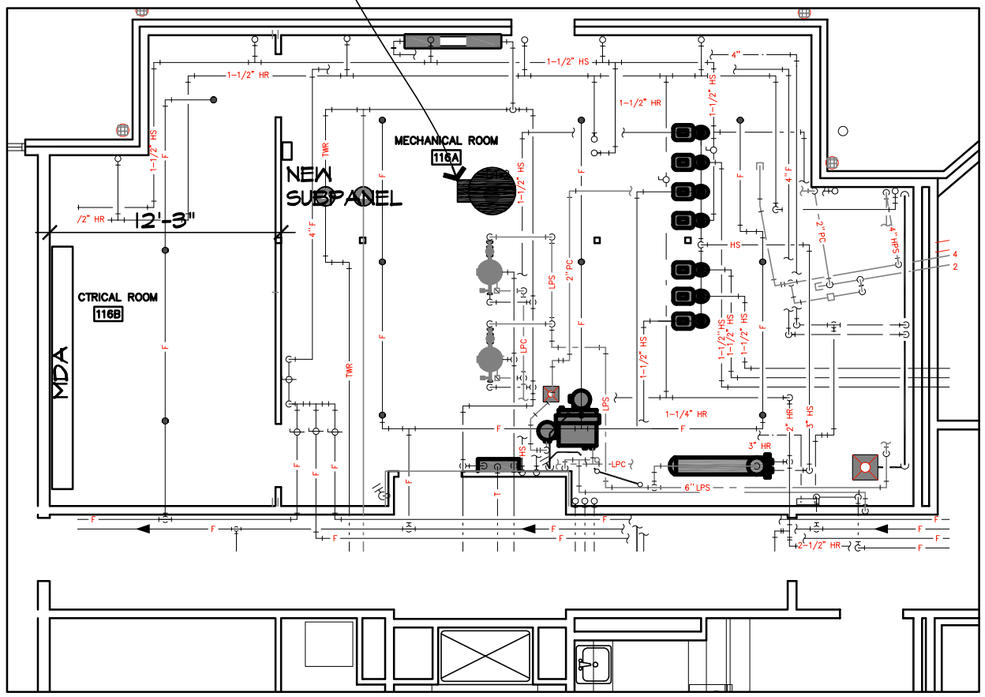


PLUMBING SCHEMATIC

PROVIDE 4" CONCRETE HOUSEKEEPING PAD - 36" X 36", WITH MIN. 6X6 WWM REINFORCING UNDER NEW WATER HEATER.

PROVIDE VALVED CONNECTION TO EXISTING 2" COPPER PIPE AT WH-2. CONNECTIONS ARE TO BE COPPER, WITH BALL VALVE, PIPE UNION, AND CONCENTRIC REDUCER TO FIT TO 1-1/4" NPT AT WATER HEATER OUTLET. PROVIDE BALL VALVE AND BALANCING VALVE COPPER CONNECTIONS TO EXISTING HOT WATER RETURN PIPING TO FIT TO 1-1/4" NPT INLET AT BASE OF WATER HEATER. PROVIDE PIPE TO DRAIN FOR CONNECTION TO ¾" NPT RELIEF VALVE OPENING. COPPER PIPING SHALL BE HARD DRAWN TYPE L, WITH CAST BRONZE OR WROUGHT COPPER CLASS 150 LB. SOCKET SOLDER FITTINGS. ALL HOT WATER AND HOT WATER RETURN PIPING SHALL BE INSULATED.

INSTALL WATER HEATER AT APPROXIMATELY THE LOCATION SHOWN. CONNECT TO EXISTING BUILDING HOT WATER PIPING WITH NEW VALVES. PROVIDE ELECTRICAL CONNECTION WITH 300 AMP BREAKER IN NEW SUB-PANEL



RS
A2.1

PARTIAL FIRST FLOOR PLAN - SOUTH WING

SCALE: 1/8" = 1'-0"

GLAS ARCHITECTS, LLC
115 West 8th Avenue, Suite 285
Eugene, Oregon 97401
www.glas-arch.com
541.686.2014

REGISTERED ARCHITECT
TRACE A. WARD
EUGENE, OR
STATE OF OREGON

CONSULTANTS

HALSELL HALL REFRESH
OSU UHDS
UNIVERSITY HOUSING & DINING SERVICES
CORVALLIS, OR

OSU-232-P-19-281

PROJECT NUMBER 2027
DATE 04/12/22

RS
A2.1

PRODUCT DATA

MasterFormat: 07 27 15

NO. 718-I

FEBRUARY 2021
(Supersedes December 2019)

AIR-SHIELD™ SMP

Sheet Membrane Vapor Permeable Air Barrier

DESCRIPTION

AIR-SHIELD SMP is a self-adhering, vapor permeable, air/liquid moisture barrier that is designed to be fully bonded to the substrate without the use of an adhesive or primer. AIR-SHIELD SMP is a tough, durable membrane that exhibits excellent resistance to air leakage and liquid water intrusion, while at the same time allows vapor to readily pass through to allow the wall assembly to dry.

USES

AIR-SHIELD SMP has been specifically formulated to act as an air and liquid moisture barrier, allowing vapor to pass through it. It may be applied to most common surfaces and integrated into various wall assemblies. AIR-SHIELD SMP is suitable for both new construction and retrofit applications and works equally well as an air barrier on precast concrete, cast-in-place concrete, masonry (concrete block), interior and exterior gypsum board, Styrofoam, primed steel, aluminum mill finish, anodized aluminum, primed galvanized metal, drywall, and plywood.

FEATURES/BENEFITS

- When properly applied, helps reduce air and moisture intrusion.
- Bonds easily and securely to a variety of building materials - no primer required.
- Excellent adhesion - remains firmly bonded to the substrate.
- High vapor permeability - allows the transmission of moisture vapor through porous building materials.
- Controlled thickness.
- Highly flexible - bridges cracks, which may form in the substrate.
- Tough, durable membrane helps resist punctures and tears during the installation process.
- Sheet-applied – no costly spray equipment or enhanced protective gear needed during installation.
- Can be installed in a wide range of temperatures.

PACKAGING

59” (1.5 m) x 164’ (50 m) Rolls
AIR-SHIELD SMP can also be cut to widths of 2.95” (75 mm), 5.91” (150 mm), and 11.81” (300 mm).

COVERAGE

806.33 ft.^{2} (74.91 m^2) per roll

SPECIFICATIONS

- Exceeds ABAA maximum assembly air leakage requirements when tested in accordance with ASTM E 2357.
- Exceeds ABAA maximum material air leakage requirements when tested in accordance with ASTM E 2178.
- Exceeds CAN/ULC S741 (materials) and CAN/ULC S742 (assemblies) requirements
- ICC-ES AC 38

TECHNICAL DATA

Property	Test Method	Result
Roll Length		164’ (50 m)
Roll Width		59” (1.5 m)
Roll Weight		53 lb. (24 kg)
Mil Thickness		26 Mils
Requires Primer		NO
Installation Temperature		14° to 140° F (-10° to 60° C)
Service Temperature		-40° F to 212° F (-40° to 100° C)
Water Resistance	AC 38	Pass
Air Permeance	ASTM E2178	<0.004 cfm/ft.^{2} @ 75 Pa
Air Leakage	ASTM E2357	<0.04 cfm/ft.^{2} @ 75 Pa
Vapor Permeance	ASTM E96 - A	41 perms
Vapor Permeance	ASTM E96 - B	54 perms
Peel Adhesion	ASTM D3330	Pass
Tensile Strength - MD	ASTM D882	50 lbf/in (5.64 N/m)

CONTINUED ON REVERSE SIDE …

W. R. MEADOWS, INC.
P.O. Box 338 • HAMPSHIRE, IL 60140-0338
Phone: 847/214-2100 • Fax: 847/683-4544
1-800-342-5976
www.wrmeadows.com

Tensile Strength - XD		30 lbf/in (3.39 N/m)
Flame Spread	ASTM E84	Class A
Smoke Development Index	ASTM E84	Class A
Low Temperature Flexibility	AC 38	Pass
Nail Penetration	ASTM D1970	Pass

*For UV exposure limits, please contact W. R. MEADOWS Technical Services.

AIR-SHIELD SMP may be used in NFPA 285 complying wall assemblies. Contact W. R. MEADOWS for further information.

APPLICATION

Refer to AIR-SHIELD SMP INSTALLATION GUIDELINES document for complete installation instructions.

Surface Preparation … All surfaces to be protected must be clean, dry, frost-free, and smooth. Remove any sharp protrusions and repair all defects. All surfaces to receive AIR-SHIELD SMP must be clean of oil, dust, and excess mortar. Strike masonry joints flush. Concrete surfaces must be smooth and without large voids, spalled areas, or sharp protrusions. Concrete must be cured a minimum of 14 days and must be dry before AIR-SHIELD SMP is applied. Where curing compounds are used, they must be clear resin-based, without oil, wax or pigments. Prepare substrate per manufacturer's instruction prior to application of membrane. All walls to receive AIR-SHIELD SMP must be capped to prevent moisture infiltration from entering the wall during construction.

Application Method … AIR-SHIELD SMP should be installed with a hand roller and stiff brush to create a continuous and effective bond with the substrate. Always install with an overlap, with the upper courses lapped over lower courses, in a shingle fashion. All horizontal and vertical overlaps should be a minimum of 2 ½" (63.5 mm).

AIR-SHIELD SMP can be applied at minimum air and surface temperatures of 14º F (-10º C) and rising. Pre-cut material to required length. Apply membrane to surface by removing release paper and rolling membrane firmly into place. Remove release paper only as membrane is being applied. Using a hand roller or stiff brush, roll press the membrane into place to ensure full adhesion to the substrate. Remove all wrinkles and/or fish mouths. Overlap subsequent courses of membrane a minimum of 2 ½" (63.5 mm). Cut AIR-SHIELD membrane with a utility knife to detail around protrusions and masonry reinforcing. Seal all membrane terminations, penetrations, and protrusions with AIR-SHIELD LIQUID FLASHING.

At the end of each working day, protect the leading edge of AIR-SHIELD SMP with a bead of AIR-SHIELD LIQUID FLASHING.

Rough Openings and Penetrations … AIR-SHIELD SMP can be used for detailing of rough openings and is to be installed in accordance with AIR-SHIELD SMP Installation Guidelines and W. R. MEADOWS published details. Alternatively, AIR-SHIELD LIQUID FLASHING can be used.

Through Wall Flashing … AIR-SHIELD THRU-WALL FLASHING is to be used for all concealed flashing installations. All areas where AIR-SHIELD THRU-WALL FLASHING is to be installed requires application of MEL-PRIME™ prior to installation. AIR-SHIELD THRU-WALL FLASHING should be recessed 1/2" (13 mm) from the face of the masonry.

PRECAUTIONS

Failure to roller the membrane effectively may result in poor adhesion to the substrate. AIR-SHIELD SMP should only be applied in dry weather when air and surface temperatures are above 14° F (-10° C). Do not install AIR-SHIELD SMP in adverse weather conditions. AIR-SHIELD SMP is not designed for permanent exposure. Contact W. R. MEADOWS technical services for exposure limits. Membrane adhesion of self-adhesive membranes on oriented strand board (OSB) can sometimes be affected by the level of surface texture or the presence of wax that is part of the binder used to bond together the wood strands. In situations where the membrane adhesion is compromised, in-situ adhesion tests should be performed to determine suitability of substrate prior to full installation. If there are variations in the OSB surface, multiple tests may be required. Refer to safety data sheet for complete health and safety information.

For more recent data sheet, complete LEED information, and SDS, visit www.wrmeadows.com.

LIMITED WARRANTY

W. R. MEADOWS, INC. warrants at the time and place we make shipment, our material will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. Read complete warranty. Copy furnished upon request.

Disclaimer

The information contained herein is included for illustrative purposes only, and to the best of our knowledge, is accurate and reliable. W. R. MEADOWS, INC. cannot however under any circumstances make any guarantee of results or assume any obligation or liability in connection with the use of this information. As W. R. MEADOWS, INC. has no control over the use to which others may put its product, it is recommended that the products be tested to determine if suitable for specific application and/or our information is valid in a particular circumstance. Responsibility remains with the architect or engineer, contractor and owner for the design, application and proper installation of each product. Specifier and user shall determine the suitability of products for specific application and assume all responsibilities in connection therewith.

DSE
COMMERCIAL ELECTRIC WATER HEATER

DSE - 5/10/20/30/40/50/65/80/100/120

Heavy duty commercial electrical water heater.

- A.O. Smith's new proprietary electronic water heater control provides precise + or – 1° temperature control that is ideal for industrial and food service applications where exact temperatures are needed.
- The Operating Set Point is adjustable from 90°F/42°C to 190°F/88°C. The factory setting is 120°F/49°C.
- Approved for 180°F/82°C sanitizing applications.
- Animated icons display detailed operational and diagnostic information. Fault or alert messages appear if an operational issue occurs.
- Each element is constantly monitored and current on/off state is displayed, any element failure is reported and its exact location is shown, eliminates a need for field testing of elements.
- Factory standard on board low water cutoff uses a remote electric immersion type probe to prevent energizing of the elements in the event of low water condition and eliminates accidental dry firing.
- Units with multiple element contactors are sequenced on with one-second delay between stages. Prevents high amp electrical loads from hitting the electric system all at once and provides a smoother operating unit. Adjustable modulating mode is optional see options.
- Control system automatically lowers the operating set point by a user defined value during setback periods. Seven-day clock may be programmed for night set back and or weekend shutdown to reduce operating cost and save energy.
- BACnet or Modbus compatible with optional ICC Gateway.
- The DSE models use a unique combination of a conventional sacrificial anode and an adaptive powered anode. The powered anode is self-adjusting to water conditions, does not require maintenance and provides longer-lasting tank protection in hard to reach areas. This multi-anode system provides superior anodic protection to hidden surfaces of the tank not protected in conventional commercial electric water heaters.
- Heavy-duty elements provide excellent protection against oxidation and scaling. Input ranges from 3kW to 90kW available (see accompanying chart). Rugged, industrial grade, elements.
- All models meet or exceed the thermal efficiency and/or standby loss requirements of the U. S. Department of Energy and current edition ASHRAE/IES 90.1.
- A.O. Smith's PermaGlas® coating provides truly superior protection against corrosion and is permanently bonded to all inner tank surfaces at 1600°F.
- ASME tank construction 160 psi working pressure
- Standard voltages 208, 240 and 480 volt single and three phase. All 208 and 240 volt at 24kW and below are supplied phase convertible (single to three and vice versa). 277 volt single phase also available. Consult factory for 120 volt power circuit availability.
- Terminal block. To accept copper or aluminum leads (on units with more than one contactor).
- 120 Volt control circuit powered by fused transformer.
- Magnetic contracters. Heavy-duty UL rated for 100,000 cycles.
- Power circuit fusing (120 amp current draw and above). Meets National Electric Code and UL requirements that water heaters must have internal fusing when current draw exceeds 120 amps.
- Simplified circuitry, color-codes for ease of service
- Hinged control compartment door
- CSA certified and ASME rated T&P relief valve

For sample specfication, please refer to the next page

OPTIONAL EQUIPMENT
DSE

Optional equipment & construction

Handhole cleanout

Dial type combination temperature & pressure gauge (Shipped loose)

Power circuit fusing (less than 120 amps)
- Sub-divides internal circuitry with maximum of 60 amp fuses. Supplied as standard when required by NEC and UL.

Alarm horn
- Horns may be furnished to warn of any condition in the heater for which sensors have been specified.

North Carolina code - factory installed T&P valve

Optional international voltages
- 380, 415, 575 and 600 volts three-phase available with Y connected elements.

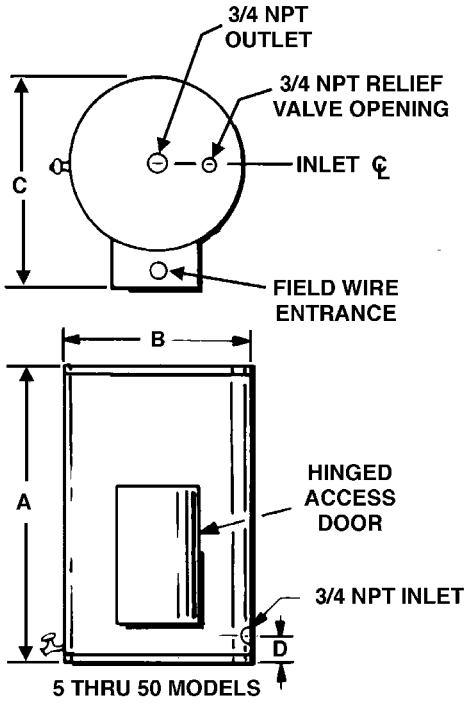
Modulating control
- The first element on is the first element off.
- Not available on single element, single contactor units.

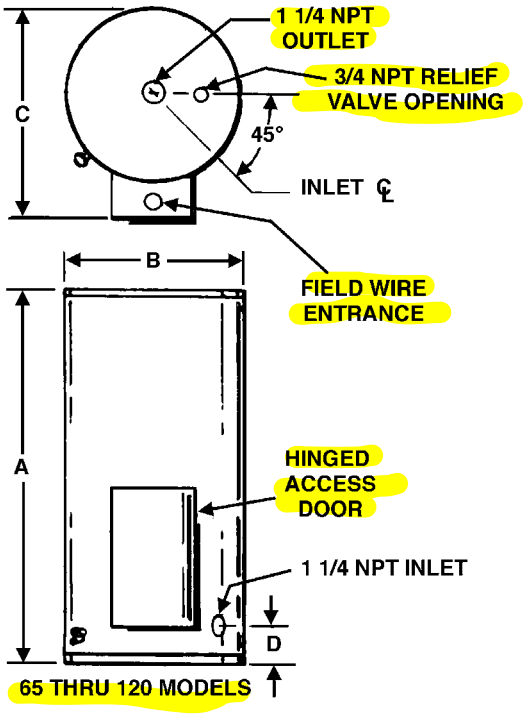
SAMPLE SPECIFICATION

The heater shall be a glass-lined Custom Xi™ commercial electric model No._____ with _____gallons storage, as manufactured by A.O. Smith. Heater should be rated at ____kW, ____volts, ____phase, 50/60 cycle AC and constructed in accordance with ASME Code, shall bear appropriate symbol and be listed with the National Board as required. Heater shall be listed with Underwriters' Laboratories and classified to The National Sanitation Foundation Standard No. 5. All internal surfaces of the tank shall be glass-lined with an alkaline borosilicate composition that has been fused-to-steel by firing at a temperature of 1600°F. Tank shall be cathodically protected with a combination of sacrificial and powered anodes. The entire vessel is to be enclosed in a round steel enclosure with baked enamel finish. Water heater shall have an electronic control with large LCD displaying current water heater status; provide real time element status and sensing, low water cutoff and economy mode operation. Shall have 120 volt control circuit transformer, transformer fusing, magnetic contactor(s), element fusing per N.E.C., and commercial grade Incoloy elements. Temperature controls include limiting switch which will require resetting manually in the event the temperature reaches 202°F. Foam insulation shall meet the thermal efficiency and/or standby loss requirements of the U. S. Department of Energy and current edition of ASHRAE/IES 90.1. Heater shall include a CSA Certified and ASME Rated T&P relief valve and a drain valve. Water heater units(s) shall be compatible with building management systems using Modbus or BACnet with optional ICC interface.

DIMENSIONS

DSE





Model number	Gallon capacity		Maxi-mum kW input	Dimensions A		B		C		D		Approx. shipping weight	
	gal.	litre		Inches	mm	Inches	mm	Inches	mm	Inches	mm	lbs	kg
DSE-5A	5	19	3	22	558.8	16	406.4	24	610	4.25	108	82	37.2
DSE-10A	10	38	6	28.13	714.5	18	457.2	26	660	5.25	133.35	116	48.1
DSE-20A	20	76	18	31.75	806.5	22	558.8	28	711	5.75	146.05	145	65.7
DSE-30A	30	114	24	43.25	1098.55	22	558.8	28	711	5.75	146.05	218	98.9
DSE-40A	40	151	36	54.75	1391	22	558.8	28	711	5.75	146.05	245	111.1
DSE-50A	50	189	90	66.19	1681	22	558.8	28	711	5.75	146.05	291	132.0
DSE-65A	65	246	90	57.25	1454	26.5	673.1	32.5	826	11.38	289	344	156.0
DSE-80A	80	303	90	58.13	1477	28	711.2	35	889	12.5	318	406	184.2
DSE-100A	100	379	90	70.25	1784	28	711.2	35	889	12.5	318	419	190.1
DSE-120A	120	450	90	70.25	1784	30.13	765.3	37	939.8	12.5	318	453	205.5

NOTE: DSE 5A to 50 A not available with G-mark for Gulf countries.

TECHNICAL DETAILS

DSE

GPH recoveries at list temperature rise													
Standard kW input	BTU/ hour	30 °F	40 °F	50 °F	60 °F	70 °F	80 °F	90 °F	100 °F	110 °F	120 °F	130 °F	140 °F
		16.7 °C	22.3 °C	27.8 °C	33.4 °C	38.9 °C	44.5 °C	50 °C	55.6 °C	61.2 °C	66.7 °C	72.3 °C	77.8 °C
3	10,236	42	32	25	21	18	16	14	13	12	11	10	9
		159	121	95	79	68	61	53	49	45	42	38	34
6	20,472	83	63	50	42	36	32	28	25	23	21	20	18
		314	238	189	159	136	121	106	95	87	79	76	68
9	30,708	125	94	75	63	54	47	42	38	34	32	29	27
		473	356	284	238	204	178	159	144	129	121	110	102
12	40,944	166	125	100	83	71	63	56	50	46	42	39	36
		628	473	379	314	269	238	212	189	174	159	148	136
15	51,180	207	156	125	104	89	78	69	63	57	52	48	45
		783	590	473	394	337	295	261	238	216	197	182	170
18	61,416	249	187	150	125	107	94	83	75	68	63	58	54
		942	708	568	473	405	356	314	284	257	238	220	204
24	81,888	332	249	199	166	142	125	111	100	91	83	77	71
		1257	942	753	628	537	473	420	379	344	314	291	269
30	102,360	414	311	249	207	178	156	138	125	113	104	96	89
		1567	1177	942	783	674	590	522	473	428	394	363	337
36	122,832	497	373	299	249	213	187	166	150	136	125	115	107
		1881	1412	1132	942	806	708	628	568	515	473	435	405
45	153,540	621	466	373	311	267	233	207	187	170	156	144	134
		2350	1764	1412	1177	1011	882	783	708	643	590	545	507
54	184,248	746	559	448	373	320	280	249	224	204	187	172	160
		2824	2116	1696	1412	1211	1060	942	848	772	708	651	606
60	204,720	828	621	497	414	355	311	276	249	226	207	192	178
		3134	2350	1881	1567	1344	1177	1045	942	855	783	727	674
75	255,900	1035	777	621	518	444	389	345	311	283	259	239	222
		3917	2941	2350	1961	1681	1472	1306	1177	1071	980	905	840
90	307,080	1242	932	746	621	533	466	414	373	339	311	287	267
		4701	3528	2824	2350	2017	1764	1567	1412	1283	1177	1086	1011

kW input	No. of elements	Wattage	Full load current in Amperes			
			Single phase	Three phase		
			240V	380V	400V	415V
3	1	3000	12,5	4,5	4,3	4,2
6	1	6000	25,0	9,1	8,7	8,3
9	1	9000	37,5	13,6	13,0	12,5
12	1	12000	50,0	18,2	17,4	16,7
15	1	15000	62,5	22,7	21,7	20,8
18	1	18000	75,0	27,3	26,1	25,0
24	2	12000	100,0	36,4	34,8	33,3
30	2	15000	125,0	45,5	43,5	41,7
36	2	18000	150,0	54,5	52,2	50,0
45	3	15000	187,5	68,2	65,2	62,5
54	3	15000	225,0	81,8	78,3	75,0
60	4	15000	250,0	90,9	87,0	83,3
75	5	15000	312,5	113,6	108,7	104,2
90	6	15000	375,0	136,4	130,4	125,0

Data subject to change
ME/DSE/01

www.aosmithme.com