

SHOP DRAWING REVIEW FORM AND TRANSMITTAL

DATE: November 12, 2021

TO: Carl Hendrickson
Project Manager
Veolia Water
825 West Water Street
Taunton, MA 02780

FROM: Michael Andrus, P.E.
Project Manager
BETA Group, Inc.
701 George Washington Hwy
Lincoln, Rhode Island 02865

RE: City of Taunton, MA
WWTF Phase 1 Improvements
Contract S-2021-1

Shop Drawing No. 15500-06 – Electric Heaters

BETA COMMENTS:

<u>Item</u>	<u>Action Code</u>	<u>Description/Comments</u>
1	2	1EUH 1,2,3,4 1. See attached comments from SAR
2	2	5EUH 1,2 1. See attached comments from SAR
3	1	Thermostats 1. Acceptable as submitted.

Action Codes

- 1 - No Exception Taken
- 2 - Make Corrections Noted
- 3 - Amend and Resubmit
- 4 - Rejected, See Remarks

- a. Installation shall proceed only when Action Code is '1' or '2'.
- b. Submittals action coded '3' shall be resubmitted within time limit set in Contract.
- c. Review does not relieve Contractor from responsibility of compliance with the Contract Documents.



Hart Engineering Corporation

SUBMITTAL:
15500-06

PROJECT: 9900. - Veolia/Taunton WWTF Phase 1 Improvements

DATE: 11/09/2021

SUBMITTAL: 15500-06 - Electric Heaters
REVISION: 0
STATUS: Eng
SPEC #: 15500

TO:
Michael Andrus
Beta Group Inc.
6 Blackstone Place
Lincoln, RI 02865
MAndrus@BETA-Inc.com

FROM:
Ryan Murphy
Hart Engineering Corporation
800 Scenic View Drive
Cumberland, RI 02864
rmurphy@hartcompanies.com

Item	Revision	Description	Status	Date Sent	Date Returned
15500-06	0	Electric Heaters	Eng	11/09/2021	
Notes:					

SHOP DRAWING REVIEW	
<input type="checkbox"/> 1 – Approved	<input checked="" type="checkbox"/> 2 – Approved as Noted
<input type="checkbox"/> 3 – Revise and Resubmit	<input type="checkbox"/> 4 - Rejected
<input type="checkbox"/> 5 – Record File Only – No Action Taken	
(Above Check Designates Action Code – See Review Comments)	
IMPORTANT NOTE FOR CONTRACTOR	
Review is only for general compliance with the design concept and information provided in Contract Documents. Corrections and comments made on the Shop Drawings during review do not relieve the Contractor from compliance with the requirements of the plans and specifications. Review and/or approval of a specific item shall not include review or approval of an assembly of which the item is a component. No approval or correction of a Shop Drawing shall be construed as an order for extra work. The Contractor is responsible for: all quantities and dimensions to be confirmed and correlated; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all trades and subcontractors; and performing all Work in a safe and satisfactory manner.	
BETA GROUP, INC.	Checked By: <u>RB (SAR)</u>
By: <u>MLA</u>	Date: <u>11/12/21</u>

Additional Notes:

Status Codes

- 1-APP – No Exceptions Taken
- 2-ANR – Make Corrections Noted
- 3-R&R – Revise and Resubmit
- 4-REJ – Rejected
- 5-IPO – For Information Purposes Only
- 6-NRR – Not Required for Review
- ENG – Submitted to Engineer

Sincerely,
Hart Engineering Corporation

DATE: 11/09/2021



TO: BETA Group

701 George Washington Highway

Lincoln, RI 02865

Attention: Mike Andrus

Sent by: R. Brown

Date: November 11, 2021

SAR Job Number: 18009.00

Reference: Taunton WWTF Upgrades – Phase 1

Enclosed Herewith We are sending you the following item(s):

- VIA Print(s) Reproducible(s) Original Drawing(s)
- Mail Diskette(s) Report(s) Sketch (es)
- Messenger Shop Drawing(s) Specification(s) Sample(s)
- Express Copy of Letter Change Order Other _____
- Email: Filename: _____ Time Sent _____ AM

Copies	Date	Description
1		15500-06 REV 0 – Electric Heaters

These are transmitted as indicated

- For approval For review and comment As requested For your information

Remarks

Copy to

File(s)

Transmittal Enclosure



Review Comments

JOB:	Taunton WWTF Upgrades – Phase 1
DATE:	November 11, 2021
SUBMITTAL NO.:	15500-06 REV 0
SUBJECT:	Electric Heaters

<input type="checkbox"/> NO EXCEPTION TAKEN	<input checked="" type="checkbox"/> MAKE CORRECTIONS NOTED
<input type="checkbox"/> REJECTED	<input type="checkbox"/> REVISE AND RESUBMIT

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for: Dimensions which shall be confirmed and correlated at the job site fabrications process and techniques of construction; coordination of His work with that all other trades; and the satisfactory performance of his work.

SAR ENGINEERING, INC.

DATE: November 11, 2021 BY: R. Brown

R-2/21/2003

Comments:

1. 1EUH- 1,2,3,4:
 - a. Verify disconnect is explosion proof.
 - b. Verify unit control circuit compatible with thermostat.
 - c. Furnish wall mounting hardware per specification 15500.2.13.C.2.d.
2. 5EUH- 1,2:
 - a. Verify unit control circuit compatible with thermostat.
3. Thermostats:
 - a. JC80EP: NO EXCEPTION TAKEN.
 - b. WT11A: NO EXCEPTION TAKEN



Aero Mechanical, Inc.

10 Leah St.
Johnston, RI 02919

Phone: 401-751-8880
Fax: 401-751-7595

SUBMITTAL

No. 6

TITLE: Electric Heat
PROJECT: Hart Taunton WWTF PH 1
Drawing: _____
STATUS: NEW
BIC: _____

REQUIRED START: 11/8/2021
REQUIRED FINISH: 11/15/2021
DAYS HELD: _____
DAYS ELAPSED: _____
DAYS OVERDUE: _____

RECEIVED FROM	SENT TO	RETURNED BY	FORWARDED TO
J. Morgan	R. Murphy		

Revision No.	Description / Remarks	Received	Sent	Returned	Forwarded	Status
NEW	Electric Heat	11/8/2021	11/8/2021			NEW



November 8, 2021

Project: Taunton WWTF Ph1
Architect: BETA Inc
Engineer: SAR Engineering
Contractor: Aero Mechanical
PO#: 7248-OSH-11367

Electric Unit Heaters

By Qmark
Bennettsville, SC

1EUH-1, 2, 3, 4

(4) GUX20004832 Explosion Proof Unit Heater, 20KW 480/3, with 24V Controls, Pilot Light, Automatic Reset Limit, Mode Switch, 60 Amp Disconnect Switch, and wall mounted E.P. thermostats.

5EUH-1

(1) QWD12432B0LSD0M0 Washdown Corrosion Resistant Unit Heater, 12.5KW, 480/3 with 24V Controls, Pilot Light, Mode Selector Switch, Manual Reset, disconnect Switch, and NEMA 4X thermostat.

5EUH-2

(1) QWD3432B0LSD0M0 Washdown Corrosion Resistant Unit Heater. Ditto above except 3KW, 480/3

Respectfully submitted,

Thomas J. Murphy



COMMERCIAL &
RESIDENTIAL HEATING &
VENTILATION PRODUCTS

QMARK[®]
A Marley Engineered Products Brand

GUX SERIES

EXPLOSION-PROOF UNIT HEATER



IDEAL SPACES

- Wastewater Treatment Plants
- Petrochemical Plants
- Chemical Plants
- Oil Refineries
- Unattended Pumping Stations
- Paint Storage Areas
- Other Hazardous Environments

COLORS

- Navajo White

DIMENSIONS

- Varies (see specifications)

TEMP RANGE

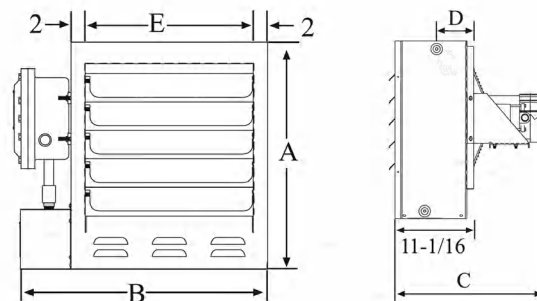
- 50°-90° F

CFM

- 700-2330



- Heats areas classified as hazardous locations designated as Class I, Group C & D Division 1 & 2 or Class II, Groups E, F, and G with a T3B ignition temperature code rating (329°F, 165°C) or higher to provide primary or supplementary heating for comfort or freeze protection
- Pre-wired, self-contained control center. Standard controls include automatic reset thermal limit, magnetic contactor, and 24V control circuit transformer
- An automatic reset high limit cutout unit is standard (optional additional manual reset high limit cutout available)
- Optional factory built-in thermostat, disconnect switch, fan selector switch, 120V control circuit, and pilot light
- Advanced heat exchanger design allows lower operating temperatures from liquid to air heat exchanger with steel tubes, aluminum fins, a non-toxic heat transfer fluid, and a pressure relief plug
- Ball bearing permanently lubricated; explosion-proof motor has built-in thermal overload protection
- Powder-coated heavy-gauge steel cabinet surrounding 14-gauge heavy-duty steel frame supports internal components



GUX SERIES EXPLOSION-PROOF UNIT HEATER

DIMENSIONS										
UNIT SIZE	A		B		C		D		E	
	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
3-10KW	19-1/8	486	23-7/8	606	21	533	3-1/5	89	13-5/8	346
15-20KW	25	635	27-7/8	708	21	533	4-13/32	112	17-5/8	448
25-30KW	32-1/8	816	31-7/8	810	21-3/4	552	5-1/2	140	21-5/8	549

MODELS & SPECIFICATIONS												
CATALOG NO.	UPC	HEATER VOLTS	WATTS (K/W)	PHASE	CONTROL VOLTS*	OUTPUT BTU/HR.	TOTAL AMPS	VOLUME CFM	AIR TEMP RISE	THROW	SHIP WT. (LBS.)	SHIP STATUS
GUX300812	6 85360 03470 6	208	3	1	24	10,236	16.7	700	13°F	28 ft.	135	AS
GUX300832	6 85360 03477 5	208	3	3	24	10,236	9.7	700	13°F	28 ft.	135	AS
GUX300412	6 85360 03448 5	240	3	1	24	10,236	14.8	700	13°F	28 ft.	135	C
GUX300432	6 85360 03452 7	240	3	3	24	10,236	8.6	700	13°F	28 ft.	135	C
GUX3004832	6 85360 03458 4	480	3	3	24	10,236	4.3	700	13°F	28 ft.	135	C
GUX300632	6 85360 03468 3	600	3	3	24	10,236	3.6	700	13°F	28 ft.	135	C
GUX500812	6 85360 03503 1	208	5	1	24	17,060	26.3	700	22°F	28 ft.	135	C
GUX500832	6 85360 03508 6	208	5	3	24	17,060	15.3	700	22°F	28 ft.	135	C
GUX500412	6 85360 03481 2	240	5	1	24	17,060	23.1	700	22°F	28 ft.	135	AS
GUX500432	6 85360 03486 7	240	5	3	24	17,060	13.5	700	22°F	28 ft.	135	C
GUX5004832	6 85360 03491 1	480	5	3	24	17,060	6.8	700	22°F	28 ft.	135	S
GUX500632	6 85360 03501 7	600	5	3	24	17,060	5.6	700	22°F	28 ft.	135	C
GUX750812	6 85360 03530 7	208	7.5	1	24	25,590	38.4	840	27°F	28 ft.	135	C
GUX750832	6 85360 03532 1	208	7.5	3	24	25,590	22.2	840	27°F	28 ft.	135	C
GUX750412	6 85360 03513 0	240	7.5	1	24	25,590	33.6	840	27°F	28 ft.	135	AS
GUX750432	6 85360 03517 8	240	7.5	3	24	25,590	19.4	840	27°F	28 ft.	135	C
GUX7504832	6 85360 03521 5	480	7.5	3	24	25,590	9.7	840	27°F	28 ft.	135	S
GUX750632	6 85360 03528 4	600	7.5	3	24	25,590	8.1	840	27°F	28 ft.	135	C
GUX1000832	6 85360 03404 1	208	10	3	24	34,120	29.2	840	36°F	32 ft.	140	C
GUX1000412	6 85360 03387 7	240	10	1	24	34,120	44.5	840	36°F	32 ft.	140	C
GUX1000432	6 85360 03390 7	240	10	3	24	34,120	25.5	840	36°F	32 ft.	140	C
GUX10004832	6 85360 03396 9	480	10	3	24	34,120	12.7	840	36°F	32 ft.	140	S
GUX1000632	6 85360 03402 7	600	10	3	24	34,120	10.6	840	36°F	32 ft.	140	C
GUX1500832	6 85360 03420 1	208	15	3	24	51,180	43	1450	31°F	47 ft.	160	AS
GUX1500432	6 85360 03408 9	240	15	3	24	51,180	37.5	1450	31°F	47 ft.	160	C
GUX15004832	6 85360 03411 9	480	15	3	24	51,180	18.7	1450	31°F	47 ft.	160	S
GUX1500632	6 85360 03418 8	600	15	3	24	51,180	15.7	1450	31°F	47 ft.	160	C
GUX20004832	6 85360 03427 0	480	20	3	24	68,240	24.8	1400	43°F	43 ft.	171	S
GUX2000632	6 85360 03434 8	600	20	3	24	68,240	20.7	1400	43°F	43 ft.	171	C
GUX25004832	6 85360 03436 2	480	25	3	24	85,300	31.1	2330	32°F	54 ft.	216	AS
GUX2500632	6 85360 03439 3	600	25	3	24	85,300	25.8	2330	32°F	54 ft.	216	C
GUX30004832	6 85360 03440 9	480	30	3	24	102,360	37.1	2330	39°F	54 ft.	216	AS
GUX3000632	6 85360 03444 7	600	30	3	24	102,360	30.2	2330	39°F	54 ft.	216	C

NOTE: Above models have built-in 24V control; optional 120V control is available (replace "2" suffix with "1" for 120V control). Includes element, motor, and transformer. All units with status "C" or "AS" are made-to-order and are non-returnable.

ACCESSORIES		
CATALOG NUMBER	UPC	
GUXPM12	6 85360 03379 2	Pole Mounting Bracket for units 3kW thru 10kW
GUXPM16	6 85360 03380 8	Pole Mounting Bracket for units 15kW thru 20kW
GUXPM18	6 85360 03381 5	Pole Mounting Bracket for units 25kW thru 30kW
GUXWM12	6 85360 03382 2	Wall Mounting Kit for units 3kW thru 10kW
GUXWM16	6 85360 03383 9	Wall Mounting Kit for units 15kW thru 20kW
GUXWM18	6 85360 03384 6	Wall Mounting Kit for units 25kW thru 30kW
GUXCM0	6 85360 03378 5	Ceiling/Hang Mounting Kit for all Models

NOTE: Specify type of mounting bracket required at time of order entry.

DIMENSIONS	
STUFFIX	DESCRIPTION
AM	Automatic and Manual reset limits
T	Thermostat, 20-80° F
L	Pilot Light (HEATER ON)
K	Pilot Light (LIMIT TRIPPED)
S	Selector Switch (AUTO/FAN ONLY)
D	Disconnect Switch - 15 amp for heaters rated 12 amps or lower Disconnect Switch - 30 amp for heaters between 13-24 amps Disconnect Switch - 60 amp for heaters 24 amps or higher
1*	120 Volt Control Transformer
E	Artic Construction

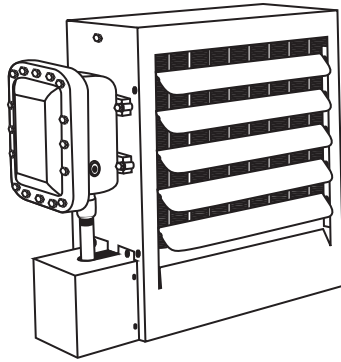
*Change heater suffix "2" to "1" for this option

www.qmarkmep.com

For Technical Services, Call 800-642-4328

ITEM# QFLY_GUX_0418-1





SUBMITTAL SHEET

GUX SERIES

**Explosion PROOF
UNIT HEATERS**

GUX SERIES - EXPLOSION PROOF UNIT HEATERS

JOB NAME: _____
 LOCATION: _____
 ARCHITECT: _____
 ENGINEER: _____
 CONTRACTOR: _____
 SUBMITTED BY: _____
 DATE: _____

ITEM	QTY.	CATALOG NUMBER	TAG	WATTS	VOLTS	Ø	AMPS	OPTIONAL CONTROLS	MOUNTING TYPE

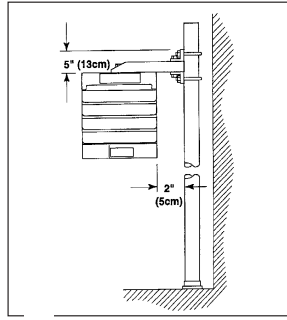
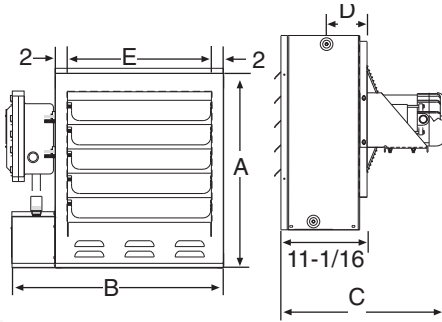
ACCESSORIES
AND
CONTROLS

ITEM	QTY.	CAT. NO.	TAG	DESCRIPTION

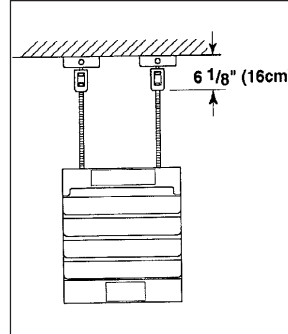
SUBMITTED BY:	DATE	APPROVED BY:	DATE



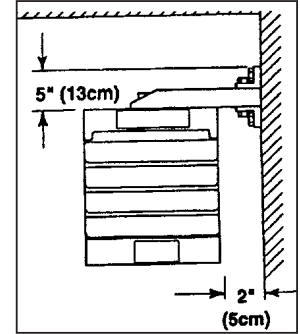
470 Beauty Spot Rd. E, Bennettsville, SC 29512
visit www.qmarkmep.com for more info



Pole Mounting Bracket



Ceiling Mounting Bracket



Wall Mounting Bracket

MODELS & SPECIFICATIONS

CATALOG NO.	UPC	HEATER VOLTS	WATTS (K/W)	PHASE	CONTROL VOLTS*	OUTPUT BTU/HR	TOTAL AMPS	VOLUME CFM	AIR TEMP RISE	THROW	SHIP WT. (LBS)	SHIP STATUS
GUX300812	6 85360 03470 6	208	3	1	24	10,236	16.7	700	13°F	28 ft.	135	AS
GUX300832	6 85360 03477 5	208	3	3	24	10,236	9.7	700	13°F	28 ft.	135	AS
GUX300412	6 85360 03448 5	240	3	1	24	10,236	14.8	700	13°F	28 ft.	135	C
GUX300432	6 85360 03452 7	240	3	3	24	10,236	8.6	700	13°F	28 ft.	135	C
GUX3004832	6 85360 03458 4	480	3	3	24	10,236	4.3	700	13°F	28 ft.	135	C
GUX300632	6 85360 03468 3	600	3	3	24	10,236	3.6	700	13°F	28 ft.	135	C
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GUX500432	6 85360 03486 7	240	5	3	24	17,060	13.5	700	22°F	28 ft.	135	C
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GUX30004832	6 85360 03440 9	480	30	3	24	102,360	37.1	2330	39°F	54 ft.	216	AS
GUX3000632	6 85360 03444 7	600	30	3	24	102,360	30.2	2330	39°F	54 ft.	216	C

NOTE: Above models have built-in 24V control; optional 120V control is available (replace "2" suffix with "1" for 120V control). Includes element, motor, and transformer. All units with status "C" or "AS" are made-to-order and are non-returnable.

ACCESSORIES

CATALOG NO.	UPC	DESCRIPTION
GUXPM12	6 85360 03379 2	Pole Mounting Bracket for units 3KW thru 10KW
GUXPM16	6 85360 03380 8	Pole Mounting Bracket for units 15KW thru 20KW
GUXPM18	6 85360 03381 5	Pole Mounting Bracket for units 25KW thru 30KW
GUXWM12	6 85360 03382 2	Wall Mounting Kit for units 3KW thru 10KW
GUXWM16	6 85360 03383 9	Wall Mounting Kit for units 15KW thru 20KW
GUXWM18	6 85360 03384 6	Wall Mounting Kit for units 25KW thru 30KW
GUXCM0	6 85360 03378 5	Ceiling/Hang Mounting Kit for all Models

NOTE: Specify type of mounting bracket required at time of order entry.

SUFFIX	DESCRIPTION
AM	Automatic and Manual reset limits
T	Thermostat, 20°-80°F
L	Pilot Light (HEATER ON)
K	Pilot Light (LIMIT TRIPPED)
S	Selector Switch (AUTO/FAN ONLY)
D	Disconnect Switch - 15 amp for heaters rated 12 amps or lower Disconnect Switch - 30 amp for heaters between 13-24 amps Disconnect Switch - 60 amp for heaters 24 amps or higher
1*	120 Volt Control Transformer
E	Artic Construction

* - Change heater suffix "2" to "1" for this option

DIMENSIONS

UNIT SIZE	A		B		C		D		E	
	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
3-10KW	19-1/8	486	23-7/8	606	21	533	3-1/5	89	13-5/8	346
15-20KW	25	635	27-7/8	708	21	533	4-13/32	112	17-5/8	448
25-35KW	32-1/8	816	31-7/8	810	21-3/4	552	5-1/2	140	21-5/8	549



470 Beauty Spot Rd. E, Bennettsville, SC 29512
visit www.qmarkmep.com for more info

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS*

Electric explosion proof unit heaters shall be supplied by QMark, a Marley Engineered Products Brand, Bennettsville, SC, USA, and shall be of the KW rating, voltage and phase specified in the schedule. They shall be fan-forced type, UL and cUL Approved for Class I, Divisions 1 and 2, Group C and D; Class II, Divisions 1 and 2, Groups E, F and G.

Unit heaters shall have manual reset thermal cutout for over-temperature protection, controlling magnetic contactor and 24 Volt control circuit transformer housed in a NEMA 7, 9 cast aluminum enclosure.

The heat exchanger shall be liquid-to-air design, utilizing a steel tube core with integral aluminum fins. Nontoxic, inhibited, propylene glycol heat transfer fluid shall be used that provides freeze protection down to -49° F (-45°C). A Pressure relief plug shall be utilized to provide overpressure protection. The heat exchanger shall include industrial grade electric heating elements.

Heat exchanger and aluminum fan blade to be enclosed in an industrial grade, corrosion-resistant cabinet fabricated from polyester powder-coated, 14 gauge steel. Adjustable outlet louvers to have minimum opening safety stops.

Fan motor shall include permanently lubricated ball bearings and built-in thermal overload protection. Motor to operate at line voltage and be prewired to the control enclosure to eliminate the need for separate field wiring to the motor.

The heater shall be provided with an accessory mounting kit designed to bear the weight of heater assembly. Chose from either a ceiling mounting kit, wall mounting kit, or a pole mounting kit.

The following factory installed and prewired control options are to be supplied: adjustable built-in thermostat, disconnect switch with external handle, fan only switch, 120 Volt control circuit for special external thermostat circuit, pilot light (to indicate abnormal operation.)

The following optional motors are to be installed and prewired to the control enclosure: 50 hertz for international requirements, Arctic duty for -40° F (-40° C) operation raises ITC to T2B, Class I, Group D only, or Class II Group E metal dust location.

QWD SERIES

WASHDOWN CORROSION-RESISTANT UNIT HEATER



IDEAL SPACES

- Wastewater Treatment Plants
- Coal Handling Areas
- Food Processing Plants
- Greenhouses
- Foundries
- Steel Mills
- Cement Plants
- Car Washes
- Ship/Marine Docks

COLORS

- Stainless Steel

DIMENSIONS

- Varies (see specifications)

TEMP RANGE

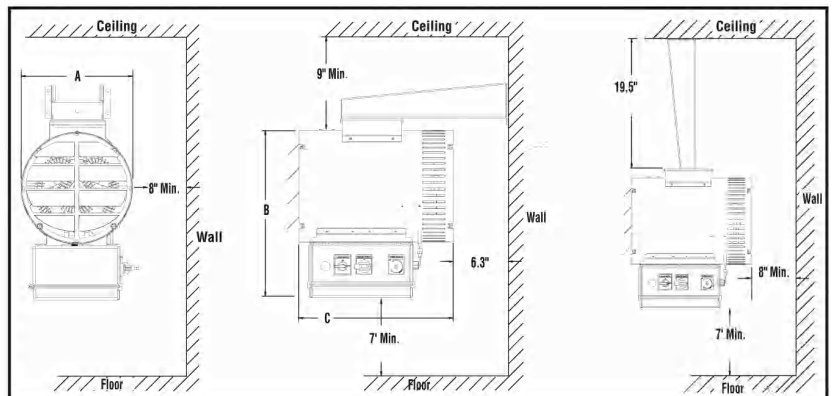
- 55°-90° F

CFM

- 700-2400



- Heater offers corrosion protection in harsh environments with ability to be hosed down for cleaning
- Completely enclosed ball bearing motor that is epoxy-coated for moisture and corrosion resistance
- NEMA 4X junction box protects against water and dust
- 16-gauge 304 Stainless Steel cabinet for longer life and rust-resistance
- 24V controls improves safety with remote thermostat
- 316 Stainless Steel-finned elements for improved heat distribution
- 14-gauge Stainless Steel wall/ceiling bracket provides multiple options for mounting
- Automatic temperature high reset limit activateS if the temperature gets too high
- Wall thermostat WT11A is NEMA 4X Rated

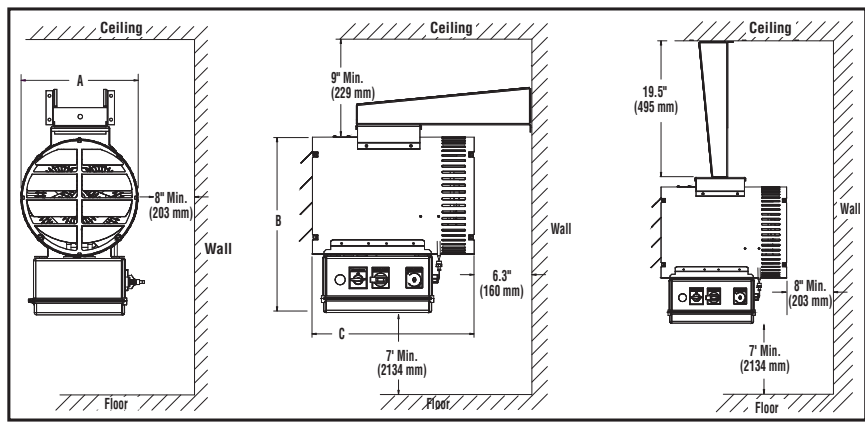




470 Beauty Spot Rd. E, Bennettsville, SC 29512

**SUBMITTAL SHEET
TYPE QWD
WASH-DOWN UNIT HEATERS**

TYPE QWD - WASH-DOWN UNIT HEATERS



CAPACITIES	
2, 3, 5, 7.5, 10, 12.5, 15, 20 KW	120, 208, 240, 277, 480, 600*V
	1Ø or 3Ø
(Varies with Model)	
25, 30, 39 KW	208, 240, 480V
	3Ø only

*Only for 5-10kw



See unit dimensions on back page

JOB NAME: Taunton WWTF Ph 1

LOCATION: Taunton, MA

ARCHITECT: BETA Inc

ENGINEER: SAR Engineering

CONTRACTOR: Aero Mechanical

SUBMITTED BY: Ocean State Htg Reps, Inc

DATE: 11-8-21

ITEM	QTY.	CATALOG NUMBER	TAG	KW	VOLTS	Ø	AMPS
1	1	QWD12432B0LSD0M0	5EUH-1	12.5	480	3	0.777
2	1	QWD3432B0LSD0M0	5EUH-2	3	480	3	.0388

ACCESSORIES
AND
CONTROLS

ITEM	QTY.	CAT. NO.	TAG	DESCRIPTION
1 & 2	2	WT11A	5EUH-1, 2	NEMA4X Line Voltage Wall T'stat

SUBMITTED BY:	DATE	APPROVED BY:	DATE
Tom Murphy / ICO / Ocean State Htg Reps, Inc	11-8-21		

SELECTION CHART

5EUH-2

5EUH-1

MODEL NUMBER	KW	VOLTS	PHASE	OUTPUT BTU/HR	HEATER AMPS	MOTOR VOLTS	MOTOR PHASE	MOTOR AMPS	TEMP RISE	CFM	SHIP WEIGHT LBS (KG)
QWD02112	2	120	1	6,824	16.7	120	1	1.554	9	700	60 (27.2)
QWD02812	2	208	1	6,824	9.6	208	1	0.896	9	700	60 (27.2)
QWD02212	2	240	1	6,824	8.3	240	1	0.777	9	700	60 (27.2)
QWD03112	3	120	1	10,236	25.0	120	1	1.554	14	700	60 (27.2)
QWD03812	3	208	1	10,236	14.4	208	1	0.896	14	700	60 (27.2)
QWD03212	3	240	1	10,236	12.5	240	1	0.777	14	700	60 (27.2)
QWD03712	3	277	1	10,236	10.8	277	1	0.673	14	700	60 (27.2)
QWD03832	3	208	3	10,236	8.3	208	1	0.896	14	700	60 (27.2)
QWD03232	3	240	3	10,236	7.2	240	1	0.777	14	700	60 (27.2)
QWD03432	3	480	3	10,236	3.6	480	1	0.388	14	700	60 (27.2)
QWD05812	5	208	1	17,060	24.0	208	1	0.896	23	700	60 (27.2)
QWD05212	5	240	1	17,060	20.8	240	1	0.777	23	700	60 (27.2)
QWD05712	5	277	1	17,060	18.1	277	1	0.673	23	700	60 (27.2)
QWD05412	5	480	1	17,060	10.4	480	1	0.388	23	700	60 (27.2)
QWD05832	5	208	3	17,060	13.9	208	1	0.896	23	700	60 (27.2)
QWD05232	5	240	3	17,060	12.0	240	1	0.777	23	700	60 (27.2)
QWD05432	5	480	3	17,060	6.0	480	1	0.388	23	700	60 (27.2)
QWD05632	5	600	3	17,060	7.2	240	1	1.8	23	1450	75 (34)
QWD07812	7.5	208	1	25,590	36.1	208	1	0.896	34	700	60 (27.2)
QWD07212	7.5	240	1	25,590	31.3	240	1	0.777	34	700	60 (27.2)
QWD07712	7.5	277	1	25,590	27.1	277	1	0.673	34	700	60 (27.2)
QWD07412	7.5	480	1	25,590	15.6	480	1	0.388	34	700	60 (27.2)
QWD07832	7.5	208	3	25,590	20.8	208	1	0.896	34	700	60 (27.2)
QWD07232	7.5	240	3	25,590	18.0	240	1	0.777	34	700	60 (27.2)
QWD07432	7.5	480	3	25,590	9.0	480	1	0.388	34	700	60 (27.2)
QWD07632	7.5	600	3	25,590	7.2	240	1	1.8	34	1450	75 (34)
QWD10212	10	240	1	34,120	41.7	240	1	0.777	22	1450	60 (27.2)
QWD10712	10	277	1	34,120	36.1	277	1	0.673	22	1450	60 (27.2)
QWD10412	10	480	1	34,120	20.8	480	1	0.388	22	1450	60 (27.2)
QWD10832	10	208	3	34,120	27.8	208	1	0.896	22	1450	60 (27.2)
QWD10232	10	240	3	34,120	24.1	240	1	0.777	22	1450	60 (27.2)
QWD10432	10	480	3	34,120	12.0	480	1	0.388	22	1450	60 (27.2)
QWD10632	10	600	3	34,120	9.6	240	1	1.8	33	2400	75 (34)
QWD12812	12.5	208	1	42,650	60.1	208	1	1.793	27	1450	60 (27.2)
QWD12212	12.5	240	1	42,650	52.1	240	1	1.554	27	1450	60 (27.2)
QWD12832	12.5	208	3	42,650	34.7	208	1	1.793	27	1450	60 (27.2)
QWD12232	12.5	240	3	42,650	30.1	240	1	1.554	27	1450	60 (27.2)
QWD12432	12.5	480	3	42,650	15.0	480	1	0.777	27	1450	60 (27.2)
QWD15812	15	208	1	51,180	72.1	208	1	1.793	20	2400	110 (49.9)
QWD15212	15	240	1	51,180	62.5	240	1	1.554	20	2400	110 (49.9)
QWD15412	15	480	1	51,180	31.3	480	1	0.777	20	2400	110 (49.9)
QWD15832	15	208	3	51,180	41.6	208	1	1.793	20	2400	110 (49.9)
QWD15232	15	240	3	51,180	36.1	240	1	1.554	20	2400	110 (49.9)
QWD15432	15	480	3	51,180	18.0	480	1	0.777	20	2400	110 (49.9)
QWD20412	20	480	1	68,240	41.7	480	1	0.777	26	2400	120 (54.4)
QWD20232	20	240	3	68,240	48.1	240	1	1.554	26	2400	120 (54.4)
QWD20432	20	480	3	68,240	24.1	480	1	0.777	26	2400	120 (54.4)
QWD25832	25	208	3	85,300	69.4	208	1	1.793	33	2400	120 (54.4)
QWD25232	25	240	3	85,300	60.1	240	1	1.554	33	2400	120 (54.4)
QWD25432	25	480	3	85,300	30.1	480	1	0.777	33	2400	120 (54.4)
QWD30832	30	208	3	102,360	83.3	208	1	1.793	39	2400	120 (54.4)
QWD30232	30	240	3	102,360	72.2	240	1	1.554	39	2400	120 (54.4)
QWD30432	30	480	3	102,360	36.1	480	1	0.777	39	2400	120 (54.4)
QWD39432	39	480	3	133,068	46.9	480	1	0.777	51	2400	120 (54.4)

All units other than standard models are non-returnable.

Factory Installed Accessories

CATALOG NUMBER	DESCRIPTION
T	Thermostat
L	Pilot Light
S	Mode/Selector Switch
D	Disconnect Switch
E	Monel Element*
M	Manual Reset
P	Epoxy Coating

* Monel elements are subject to longer lead times - contact factory for details.

kW	Dimensions Inches (mm)			
	A	B	C	D
2-10	13 (330)	19.5 (495)	18 (457)	19.5 (495)
12.5-39.0	20 (508)	31 (787)	27 (686)	24.2 (615)

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

Corrosion resistant unit heater(s) shall be supplied by QMark, A Marley Engineered Products Brand, Bennettsville, SC. The unit heater(s) shall be UL listed for corrosive areas and NEMA4X wash down requirements.

HEATING ELEMENTS: The heating elements shall be corrosion resistant 300 stainless steel sheathed with 316 stainless steel fins for maximum heat dissipation. The elements are to be attached to junction box with leak-resistant stainless steel fittings.

CONTROL CENTER: The controls are completely factory wired and tested and enclosed in a NEMA4X molded fiberglass control enclosure mounted beneath the heater cabinet. The control center shall include contactors,

automatic reset over-temperature protector, fan delay relay, motor contactor and fused transformer for 24V control circuit. Convenient terminal blocks are included for remote thermostat connection.

FAN AND MOTOR ASSEMBLY: The fan and motor assembly shall include a totally enclosed, permanently lubricated, ball bearing motor, epoxy coated for corrosion resistance. Motor rating shall be 1/4 hp up to 10KW. 1/2 hp for 208V and 3/4 hp for 240/480 for units above 10kw. The fan shall be aluminum with corrosion resistant coating, directly connected to the motor, and be dynamically balanced. An epoxy sealed thermal fan delay shall be provided to allow the fan to continue to operate after heating thermostat has been satisfied to maximize

transfer of generated heat to space being heated. The fan and motor shall be protected by an adjustable louvered outlet grille to direct flow up or down, painted with one coat zinc chromate primer and two coats of corrosion resistant paint.

OVER-TEMPERATURE PROTECTION: Built in over temperature protection shall be provided by an automatic reset thermal cutout.

HEATER CASE: The heater case shall be constructed of heavy 16 gauge type 304 stainless steel for corrosion resistance and assembled with stainless steel hardware. A stainless steel combination wall and ceiling swivel type mounting bracket to be supplied with unit heater.

1EUH-1 to 4



5EUH-1, 2



	JC80EP	WT11A	WT12A
Action	Snap Action Switch	Positive snap action switch	
Type	SPST	SPDT	
Amp Rating		Nema 4X rated	
120V	25A	25A	
208V	22A	25A	
240V	22A	25A	
277V	18A	22A	
Pilot Duty	Yes 125VA	Yes 125VA	
Range (°F)	40°F to 90°F	40°F to 110°F	
Differential	+/- 3°F	+/- 2 1/2°F	
Features	This explosion proof room thermostat is suitable for Class 1, Group D and Class II, Groups E, F, and G locations.	Nema 4X weatherproof enclosure. The control has a SPDT output and can be used for heating or cooling (ventilation) Multi-positional mounting offers flexibility in new or existing installations.	