HVAC INSTALLATION, OPERATION MAINTENANCE MANUALS (IOM):

Project: Kelley Walsh High School

Architect:

Engineer: EDA

Contractor: KK Mechanical

Manufacturers Rep: S. Conley Sales, Inc.



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INSTALLER'S RESPONSIBILITY

This equipment has been inspected, tested and shipped free of defects. However, it is the installer's responsibility to check for loose wires, leaks, or loose fasteners, and correct any problem that may be found. Inspect the equipment immediately when received to determine if there is any damage from shipment. First, check for visible damage to the unit. Turn the fan by hand to determine if any damage has occurred. If any damage has been found, the receiver should note the damage on the bill of lading and immediately file a claim with the transport company.

It is the equipment owner's responsibility to provide any scaffolding or other apparatus to allow service or periodic maintenance to this equipment.

Warning: Improper installation, adjustment, alteration, service, or maintenance can cause damage, injury, or death. Read this manual thoroughly before installing, operating, or servicing.

INSTALLATION

Warning: Disconnect all power, steam, or water supplies before installing or servicing the unit. Do not depend on a thermostat or other switch as sole means of disconnecting power. Always disconnect power at the main breaker.

Caution: Insure that all power sources conform to the requirements of the unit heater or damage to the unit will result. All external wiring and piping must conform to the local and national codes.





UNIT MOUNTING

Install unit heaters to meet Occupational Safety and Health Act (OSHA). Unit heaters mounted less than 8 feet (2.4 meters) above the floor must be equipped with a fan guard. Ensure that all hardware used in the suspension of each unit heater is more than adequate. Failure to do so may result in extensive property damage, severe personal injury, or death.

Suspension nuts are provided on the top of all models. Support rods should be installed so that they support the total weight of the unit heater to assure that no strain is placed on the supply and return piping. Provisions for removal of the unit from the suspension rods may be desirable for future servicing. Otherwise, the provision of sufficient clearance around the unit heater for future maintenance and servicing is required.

Note: Increasing clearance distances may be necessary if there is any possibility of distortion or discoloration of adjacent materials.

Important: Unit heaters must be hung level from side to side, and front to back. Failure to do so will result in poor performance and/or premature failure of the unit.

It is assumed that the type of system to be used has been selected by the design engineer. The diagrams shown in the manual are for different types of steam or hot water systems. It is important that the system be kept clean and free of foreign substances, such as excessive joint materials, etc.

For steam systems it is recommended that the unit be mounted level for proper condensate drainage. Swing joints should be used in piping, and piping should be pitched down so condensate can drain freely.

Isolators are not required, but may be desirable for some applications. Refer to dimensional drawings for unit weights.

Hanging hardware is not included with the unit (to be field supplied).

Place unit heaters at points of greatest heat loss. Blanket outside doorways and provide ample coverage of window areas. Keep the unit heaters away from objects that will impede the full and natural air delivery of the units.

PIPING

Refer to the appropriate model dimensional drawing to determine the piping connection type, size, and location. Follow standard practices and codes when installing piping. Provide swing joints for expansion purposes, unions and shut-off valves for servicing purposes, as well as valves and traps for control purposes. Refer to Typical Piping Connections Diagrams for details.



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COIL OPERATION

Maximum recommended steam pressure for standard units is 15 psig at 275°F. The maximum recommended pressure for hot water applications is 150 psig at 275°F. For higher operating temperatures and pressures, special coils and ratings are required.

UNIT OPERATION

Most basic unit heater systems are controlled by a room thermostat. Install thermostat on an inner wall or column to achieve optimum control of that area. Set thermostat for desired temperature.

For steam systems, a low temperature setpoint limit could be used to prevent the fan from blowing cold air when there is no steam passing through the coil.

Small hot water systems could have the circulating pump controlled directly by the room thermostat. Large systems may use zone valves to control individual unit heaters where constant water circulation is used on the pain system.

A louvered cone air diffuser is available as an optional accessory for vertical unit heaters.

MAINTENTANCE

Warning: Disconnect all power, steam or water supplies before installing or servicing the unit. Do not depend on a thermostat or other switch as sole means of disconnecting power. Always disconnect power at the main breaker.

Caution: Allow rotating fans to stop before servicing to avoid serious injury to fingers and hands.

Motor Lubrication. Standard motors are pre-lubricated normallv and are not equipped with grease fittings. For motors that are equipped with grease fittings, contact the local motor manufacturer service facility to obtain information on the grease or oil type, and the method and frequency of lubricating. The frequency of lubricating will depend on operating conditions and length of running time.





CLEANING

For cleaning or maintenance purposes, the fan-motor assembly can be removed from the unit heater. The unit casing, fan, diffuser, and coil should be cleaned thoroughly once each year. The heating performance and air throw depend on cleanliness of the coil and fan blades.

When cleaning the fan-motor assembly, wipe all excess dirt or lubricant from the motor casing. Buildup on the motor casing will cause it to run hot and eventually cause inconvenience or discomfort due to random automatic thermal overload shut down, or could cause internal motor damage. Note: standard unit heater motors have integral automatic thermal overload protection. Clean the coil by loosening dirt with a brush on the fan side of the coil, then operate the unit allowing the fan to blow the loosened dirt through the unit. Use high pressure air or steam on the coil away from the fan.

Use a damp cloth to clean the casing, fan blades, or diffuser. If rust spots are found on the casing, they should be cleaned and repainted.

Tighten the fan guard, motor frame and fan bolts. Check the fan for clearance in the panel orifice and free rotation.

The heater system should be checked once per year by a qualified technician. All maintenance and service information should be recorded.

TABLE 1	TROUBLE-SHOOTING	CHART

S үмртом	POSSIBLE CAUSE	CORRECTIVE ACTION
Leaking Coil	1. Frozen coil	1. Replace coil.
	2. Defective coil	2. Replace coil.
	3. Corrosion	3. Replace coil.
	4. Leak in joint	 Braze joint if joint is exposed where leak has occurred.
Poor output	1. Check for air in coil	1. Repair or replace thermostatic air vent.
on steam	2. Lint on coil fins	2. Clean coil and fins. Check filter and clean.
Poor output on steam or hot water	 No circulation of water through coil Short cycling of motor Backward rotating motor 	 Check circulation pump. Check for blocked tubes. Check voltage and correct. Remove and service motor to confirm if automatic overload needs repair. Change direction of motor rotation to by making appropriate wiring changes as recommended by
		the motor manufacturer.
Noisy or	1. Damaged fan	1. Change fan.
vibrating unit	2. Dirty fan	2. Clean fan.







TABLE 2 HORIZONTAL UNIT HEATER SPECIFICATIONS

	FIGURE			Di∾	IENSIONS	(IN)			Wт	MAX.	MAX THROW (FT)		
Model	REF.	Α	В	С	D	E	F	G	(LB)	Мт д. Нт (г т)	w/ Horiz. Louvers	w / V ert. Louvers	
30-H	1	22	13.5	4.75	8	7.50	15.5	0.50	40	9	18	23	
40-H	1	22	13.5	4.75	8	7.50	15.5	1.25	40	10	23	29	
47-H	2	27	16.5	5.00	8.5	7.75	16.25	1.25	48	10	23	29	
58-H	2	27	16.5	5.00	8.5	9.50	18.0	1.25	48	10	28	35	
62-H	2	31.5	19.5	5.625	10	9.50	19.5	1.25	71	10	25	30	
84-H	2	31.5	19.5	5.625	10	7.50	17.5	1.50	76	12	32	40	
133-H	2	37.0	24.0	5.875	10	7.75	17.75	1.50	108	13	40	50	
200-H	2	42.5	28.5	5.50	10	9.50	19.5	1.50	148	15	50	64	
245-H	2	46.5	31.5	5.50	10	9.50	19.5	1.50	172	16	54	68	







Money	Dimensions (in)								
MODEL	A	В	С	D E		F	G	Н	J
40-V	18.5	10	2.625	1.25	1.5	3/8-16 UNC	2.75	6.125	1.25
50-V	18.5	10	2.625	1.25	1.5	3/8-16 UNC	2.75	6.125	1.25
54-V	22	13	2.625	1.25	1.5	3/8-16 UNC	2.75	6.125	1.5
67-V	22	13	2.625	1.25	1.5	3/8-16 UNC	2.75	6.125	1.5
78-V	26.5	16	2.625	1.25	1.5	3/8-16 UNC	2.75	7.625	1.625
100- V	26.5	16	2.625	1.25	1.5	3/8-16 UNC	2.75	7.625	1.625
145-V	30.875	20	3.375	1.5	2	3/8-16 UNC	2.75	7.625	2
210-V	36.875	25	3.375	1.5	2	3/8-16 UNC	2.75	7.625	2.375
300-V	44.125	30	4.125	2	2.5	1/2-13 UNC	3	9.125	3
370-V	44.125	30	4.125	2	2.5	1/2-13 UNC	3	13.625	3
375-V	44.125	30	4.125	2	2.5	1/2-13 UNC	3	9.125	3
480-V	44.125	30	4.125	2	2.5	1/2-13 UNC	3	13.625	3

			Dı	MENSIONS (IN)		Мах. Мтд. Нт. (гт				
Model	к	L	м	N	Р	R	S	Wт (lb)	WITHOUT LOUVER	With Louver	
40-V	3	11.5	12.25	6	1.125	6.25	8.875	49	12	16	
50-V	3	11.5	12.25	6	1.125	6.25	8.875	50	17	22	
54-V	3	11.875	14.375	6	1.25	7	10	62	13	16	
67-V	3	11.875	14.375	6	1.25	7	10	63	19	23	
78-V	2	12.25	16.375	7	1	7.25	10.625	85	14	17	
100- V	2	12.25	16.375	7	1	7.25	10.625	90	21	25	
145-V	2.375	13.5	20.375	7	1.5	9	13.25	118	23	28	
210-V	4	15.25	24.5	7	1.25	8.5	11.875	146	26	32	
300-V	3	15.875	30.5	7	0.75	9.5	13.75	200	26	32	
370-V	1.875	19.25	30.5	7	0.75	9.5	13.75	265	28	34	
375-V	4.5	17.375	30.5	8	0.75	9.5	13.75	205	40	48	
480-V	2.5	19.875	30.5	8	0.75	9.5	13.75	270	42	52	





FIGURE 4 TYPICAL PIPING CONNECTIONS



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CORPORATION



Force Flow Heaters

GENERAL NOTES

1. Examine entire unit for damages in shipping upon receipt of the unit. Any shortages or damage should be noted on the carrier's delivery document. After inspection issue a purchase order for necessary parts or contact the factory for repair or replacement. Please do not return equipment without the prior authorization of the factory.

2. Installation and maintenance should only be performed by qualified personnel and in accordance with local codes and regulation.

3. Operate at maximum entering water temperature of 200°F (93°C).

4. For units not immediately installed storage should occur in a dry location with the motor protected from moisture, dust, corrosion and damage. If storing units for more than one year contact the motor manufacturer for further protection instructions.

5. *Caution;* sharp edges, coil surface and rotating fan are a potential hazard.

ADDITIONAL WARNINGS

Familiarization with and adherence to national electrical code and local/state codes is highly recommended.

1. Avoid contact with energized circuits and/or rotating parts. Contact with operating voltage may be fatal.

2. Lifting of this unit should be done with care and in accordance with prescribed procedures.

3. Insure the unit is electrically grounded in accordance with code requirements.

4. Ensure unit is properly secured to prevent access by children or unauthorized persons in order to avoid possible accidents.

5. Avoid contact with capacitors until safe discharge procedures have been completed.

6. Do not under any circumstance restrict the motor ventilation.

7. If the unit has been subjected to storage in a damp environment dry out thoroughly before operating.



WARNING: Failure to follow all safety information can result in serious personal injury or death. Before servicing, disconnect all power. This motor must be connected to the electrical service ground in accordance with local or national code. Consult a qualified electrician with any questions.





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GENERAL INSTALLATION

All units are shipped fully assembled. If the unit is a fully or semi-recessed model type then a wall seal trim will be included and must be installed as per the provided instructions.

Remove front panel, line up roughed in piping and position the unit in the desired wall or ceiling location.

Attach unit to wall or ceiling using the provided holes in the back panel of the unit.

Piping should always be installed and connected using good practice and in accordance with applicable codes.

Wiring should be completed in accordance with applicable codes. All models are furnished with a fan control box in the desired location on the unit. If the speed or temperature control are to be remote mounted the junction box must be supplied by an other.

Once the unit is completely installed a test run should be performed. If operational difficulties are experienced, recheck all wiring connections and power source.

MAINTENANCE

Motors. Motors are a permanent split capacitor type fitted with self lubricating sleeve bearings. In order to extend motor life the bearing should be "recharged" with an annual lubrication. Use an SAE 10 non detergent oil applied only in the oiling holes provided.

Coils. Coils are to be kept clean in order for proper heat transfer to exist. The conditions of each operating environment will change the frequency of cleaning. The coils can be vacuumed or alternately use the following methods. Brush the fins on the air intake side and then place a bag or damp cloth over the unit discharge. Activate the unit and the dirt will be trapped in the bag or cloth. The coil can also be cleaned with high pressure air which should be blown on the outlet side of the coil (blowing air on the inlet will force dirt deeper into the coil).

Blowers. Blowers can be cleaned using high pressure air.

Filters. Filters should be kept clean to ensure the proper circulation of air volume through the unit. The frequency of the cleaning varies and is dependant upon the operating environment. As a guide they should be washed in mild detergent or blown clean with compressed air every 3 months.



Force Flow Heaters



UNIVERSAL FORCE FLOW COLLARS

A standard trim which is used on any semirecessed or fully recessed model. Mounted on sight to allow for infinite mounting depth adjustment. Simply mark the depth location of the desired reveal minus 1/2" for the trim thickness and fasten the side bars centered with the front edge on the line. (Figure 4 shows sides being mounted to a fully recessed model wall mount)

The top and bottom bars have pocketed ends to provide quick and easy alignment. The protruding ends of the side bar (Figure 2 & 3) fit snugly in the pockets and provides the proper alignment for the top/bottom bar to be fastened to the cabinet. For floor mount units the bottom bar is not used and the sides are fastened even with the bottom of the unit and do not protrude. The collars have been designed for this so no cutting is required on the side bars. The top is mounted normally and the extra protrusion of the side bar does not affect the mounting.

FIGURE 2

FIGURE 3

AND TOP

SIDES AND TOP ALIGNED AND **READY TO BE** FITTED





FIGURE 4

ASSEMBLY VIEW FOR FULLY RECESSED UNIT





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WALL FIN MAINTENANCE INSTRUCTIONS

Inspection & Storage

Inspect the entire shipment for damage, either readily visible or concealed. Wall fin components should be stored under dry, clean conditions. Any protective packing should not be removed until the components are required for installation, unless damage in transit is suspected.

Fin-Tube Radiation Maintenance

Regular maintenance of the fin-tube radiation units will help keep the unit running at optimum capacity. A regularly scheduled inspection and maintenance program should be implemented and followed.

(1) Cover:

Use a soft non-abrasive cloth with a standard household cleaner. Under no circumstances should an abrasive cleaner be used.

(2) Heating Element:

The heating element should be cleaned at least once every year. More frequent cleanings should occur if the heating element appears to have a build-up of contaminants.

Remove any dirt by brushing or vacuuming the heating element. High-pressure air may be blown through the heating element to dislodge any built-up contaminants.

In extreme cases, it may be necessary to remove the heating element and spray it with a mild alkaline cleaning solution, followed by a rinse.

Standard SIGMA Wall mounted enclosure Installation Instructions

- (1) Determine the distance needed for wall enclosure application. The mounting channel (hanger strip or joggle strip) and the full height backplate (if required) should be installed on the entire wall surface where the enclosure and accessories will be installed.
- (2) Cut the mounting channel or full backplate to the desired length. The channel and backplate are furnished in lengths of 6'-0". Combine multiple lengths if needed. When joining two pieces, make sure that the cut end is at the end of the run.
- (3) Find and mark the mounting height on the wall. (The standard mounting height is equal to the enclosure height plus 4".) The mounting channel or full backplate should be lined up flush with the marked mounting height.
- (4) Attach the mounting channel using fasteners suitable for wall construction. Ensure channel is leveled.
- (5) Fasten the brackets flush to and under the hangerstrip (The brackets should be installed approximately 36" apart.) bracket is installed with a fastener using the recessed hole of the bracket.
- (6) For second tier elements, mount and fasten the additional tier brackets on to the support brackets.
- (7) Install the heating element on the slide cradles located on the bracket. (The end of the heating element should be installed at least 3" from the bracket.) If installing additional rows of heating element or return piping, always install the bottom-most element first and work upward. Ensure tubing rests on cradle.
- (8) Place top of enclosure panel on to hanger strip and snap bottom of panel on to the BKTCE bracket.
- (9) For 2 or more side by side enclosure panels join by a panel joiner.
- (10) If an access panel is used, join access panel to enclosure panel by a joiner and use an additional mounting bracket to secure it in both sides.
- (11) Install accessories between the wall and wall channel at the top and around the cover at the bottom. The accessories are overlapping. Hook bottom of trim strip on the bottom of enclosure panel, swing trim up and hook top of trim on the top of enclosure/ hanger strip. For corners fasten at the top by #10 screws. To install the end caps just slide it to the end of the enclosure.
- (12) If an access door is required, locate it on enclosure panel; cut out a 5 ¹/₂" square opening and drill four ¹/₄" diameter holes on corners of 6 ¹/₂ square. Mount and fasten access door assembly.

Standard SIGMA pedestal enclosure Installation Instructions

- (1) The floor should be continuous and level under each pedestal. Snap a chalk line on the floor along the centerline of the pedestals. The pedestal centerline should be 9" from the wall for one row pedestals, and 11-1/2" from the wall for two row pedestals.
- (2) Place the pedestals along the chalk line evenly. The pedestal should be installed a maximum of 3'-0" apart on center. Secure the pedestal using a fastener suitable for floor construction.
- (3) Fasten tops of pedestal base.
- (4) Place the heating element on the pedestal. Before connecting the piping to the system, be sure to purge the system to insure against heating element blockage. Care must also be taken to prevent debris from entering the system when making the piping connections. Ensure tubing rests in cradle.
- (5) Install the enclosure over the pedestal bracket. Slide enclosure panel into pedestal base and screw bottom of panel to the base.
- (6) For 2 or more side by side enclosure panels join by a panel joiner.
- (7) If an access panel is used, join access panel to enclosure panel by a joiner and use an additional pedestal base to secure it in both sides.
- (8) For trims and corners, slide down over enclosure and snap bottom of trim and/or corner on to the bottom of enclosure and fasten with #10 screws.
- (9) To install the end caps just slide it to the end of the enclosure.



Color reproductions are approximate. The actual colors may differ slightly from actual paint color

Sales orders cannot be released for production until a finish color has been assigned.





Primer Finish for Field Painting



IMPORTANT: Primer finish is only recommended for field painting only and is not intended to be a final finish. Best described as a "light gray flash primer", it has a low gloss flat finish, providing an ideal surface for field applied paint, with no need for any surface preparation prior to field painting, other than to ensure it is free of dust or debris. Color reproduction shown for primer finish is approximate.

Primer Finish (Not a final paint finish, see above note)

Panel Radiators

Technical Catalogue





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Sigma Panel Radiators 1. Product Overview



The Sigma Panel Radiator is an innovative approach in hydronic architechural heating panels. With its totally enclosed active heating element and a simulated tubular facade, this unit provides the aesthetic beauty of a steel panel radiator, with the capability of high water temperature operation. This is accomplished by ensuring that the exterior tube facade does not carry any water. Instead, the water is carried by a high capacity heating coil insulated from the exterior tubes of the facade.



Sigma Panel Radiators 2. The Basics



Sigma Panel Radiators are manufactured to give the appearance of a Steel panel radiator with the advantage of still being safe using high temperature water.

Over the years Steel panel radiators have been misapplied using high hot water temperature in areas where the public can touch the radiator. This can result in burns and applications that violate building codes across North America. Many building codes do not allow temperatures to be above 140 °F in pipes. Utilizing a small safety factor, the entering water temperature should not be specified at greater than 135 °F entering water temperatures.

Even when consultants specify average water temperatures of 125 °F or less, using a 20 °F delta T, sometimes building operators will increase water temperatures on cooler days. This places the building and the owner at risk of violating codes for high hot water temperatures.

With its totally enclosed active heating element and a simulated tubular façade, this unit provides the aesthetic pleasure as well as practical safety. This is accomplished by ensuring that the exterior tube façade, unlike steel panel radiators, does not carry any water at all. Instead the water is carried by a high capacity heating coil insulated from the exterior tube facade. This unit can also be used at lower water temperatures.

The aluminum exterior does not reach temperatures above 125 °F even when steam or extreme hot water is applied to the unit, ensuring safe operation regardless of outside adjustments.

The Sigma Panel Radiator will comprise of oval shaped tubes arranged in a Pedestal or Wall Mounted configuration.



Sigma Panel Radiators 3. Design Considerations



The convector coils shall be tested at 250 psig and can operate at a working pressure of 150 psig. The coils are fully headered at each end and standard pipe connections of 1/2" NPT are provided. (optional %" NPT are available) Unit shall be painted in a powder coat process. All painted surfaces shall be cleaned and phosphatized in preparation for powder coating. Paint thickness shall be 2 to 3 mils. Sigma offer standard colours from our color chart, special colors can be specified to match the architect's request. Pedestals will be supplied for field mounting of floor mounting version. Continuous joggle strip will be supplied for field mounting of wall mount versions. Contractor to ensure that the units are installed level and appropriate fasteners utilized for respective mount surfaces.



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Sigma Panel Radiators 4. General Specifications

CONCEPT

The Sigma Panel Radiator Konvector is built with high capacity heating element that has the capability of both high water temperature and low pressure steam applications.

FLEXABILITY

SI

The SRK concept of construction allows the flexibility of various heating element configurations to suit the capacity requirements of given assembly heights for wall mount or pedestal mount applications.

RATION

UNIT SPECIFICATION

The Sigma Panel Radiator Konvector will comprise of flat oval-shaped tubes arranged in pedestal or wallmount configurations, as required. The tubes shall form an architectural façade and shall not carry any hot water. All exterior surfaces shall be painted with a baked on powder coat process. All painted surfaces shall be cleaned and apostatized in preparation for powder coating. Paint thickness shall be 2 to 3 mils. For optional colors refer to Sigma colour chart. Custom colours are available.

Pedestals will be supplied for field mounting of floor mount styles. Continuous joggle strip will be supplied for field mounting of wall mount assemblies. Contractor to ensure that the assemblies are installed level and appropriate fasteners utilized for respective mount surfaces. Optional overlapping accessories such as trims, corners, and end-caps to be provided as directed. The high capacity hydronic convector element shall be manufactured of copper tubes and aluminum fins and shall be tested at 250 psig and can operate at a working pressure of 150 psig. The number of tubes, fin size, and connection configurations shall be provided to suit the supply and return locations as shown on the plan drawings. The connections will be nominal 1/2", 5/8", or ¾" sweat connections, depending on element configuration. Element length and quantities shall be provided to suite the required capacities.

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Sigma Panel Radiators 5. Customer Specifications

SECTION 15XXX

1.0 General

1.1 Scope

1.1.1 Convective Panel Radiators

1.2 Quality Assurance

- 1.2.1 Panel Radiators shall be manufactured by a company regularly engaged in the manufacture of radiant panels and having certified catalogued performance data.
- 1.2.2 Standard of Acceptance: Sigma

1.3 Submittals

1.3.1 Manufacturer shall provide complete submittals con siting of shop drawings showing A; scaled layouts identifying panel type, capacity of each panel, length of panel, pressure drops and installation details.

2.0 Product

2.1 General

2.1.1 Manufacturer shall refer to Architectural and mechanical plans and details to determine location, quantity and finish of the panel radiator.

2.2 Convective Panel Radiator.

- 2.2.1 Convective Panel Radiator shall be made of oval shaped tubes arranged in pedestals or wall mounted configuration as noted on the drawings. The oval shaped tubes shall form the architectural façade and no hot water shall flow through the tubes.
- **2.2.2** All surfaces shall be cleaned and phosphalized in preparation for powder coating.
- **2.2.3** Powder coating shall be applied to a thickness of 2 to 3 mils.



- 2.2.5 High capacity hydronic convector element shall be manufactured of copper tubes and aluminum fins. The element shall be tested at 250psig and have an operating pressure of 150 psig.
- 2.2.6 Element length and quantities shall be selected to suit the required capacities. The number of tubes and connection configurations shall be provided to suit the supply and return connections as shown in the plan drawings.
- 2.2.7 All bare pipe coming into the Panel convector shall be covered by either trims or pedestals as supplied by the manufacturer or ferred in by contractor to ensure standard accessories from the manufacturer can be applied. Bare pipe coming into the unit will not be acceptable.

3.0 Execution and Installation

- **3.0.1** Contractor shall cooperate with the trades working in the space. Hot water piping as well as hangers shall be mounted clear of all other work.
- **3.0.2** All interconnectors between panels shall be supplied and installed by the contractor.
- **3.0.3** Site contractor will supply and locate valving on supply and return lines.
- **3.0.4** Supply and return lines shall be hidden behind the enclosure. In pedestal units the pedestals shall be located to correspond with supply and return piping. Contactor to co-ordinate with manufacturers standard.

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6A. Product Nomenclature







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