SECTION 224716 - PRESSURE WATER COOLERS

Revise this Section by deleting and inserting text to meet Project-specific requirements.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

1. GENERAL
	* + 1. RELATED DOCUMENTS

Retain or delete this article in all Sections of Project Manual.

* + - * 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
			1. SUMMARY
				1. Section includes pressure water coolers and related components.
			2. SUBMITTALS
				1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer's installation instructions shall be provided along with product data.
				3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals)
				4. Product Data: For each type of pressure water cooler.

Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

* + - * 1. Shop Drawings: Include diagrams for power, signal, and control wiring.
			1. CLOSEOUT SUBMITTALS
				1. Maintenance Data: For pressure water coolers to include in maintenance manuals.
			2. MAINTENANCE MATERIAL SUBMITTALS
				1. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

Filter Cartridges: Equal to <**Insert number**> percent of quantity installed for each type and size indicated, but no fewer than <**Insert number**> of each.

1. PRODUCTS

See Editing Instruction No. 1 in the Evaluations for cautions about named manufacturers and products.

* + - 1. PRESSURE WATER COOLERS

Copy "Pressure Water Coolers" Paragraph below and re-edit for each type of pressure water cooler required.

Insert number to complete drawing designation. Use these designations on Drawings to identify each pressure water cooler.

* + - * 1. Pressure Water Coolers <Insert drawing designation>: [Freestanding] [Flush to wall].

Standards:

Comply with NSF 61 “Drinking Water Systems Components - Health Effects” and NSF 372 “Drinking Water System Components - Lead Content”.

Comply with ASHRAE 34, "Designation and Safety Classification of Refrigerants," for water coolers. Provide HFC 134a (tetrafluoroethane) refrigerant unless otherwise indicated.

Cabinet: [All stainless steel] [Steel with powder-coat finish] [Vinyl-covered steel with stainless-steel top] <Insert material>.

Bubbler: One, with adjustable stream regulator, located on deck.

Retain subparagraph below for all non-secure installations.

Bottle Filler: [**Sensor**] [**Push-button**] activation with [**20-second**] <Insert value> automatic shutoff timer. Fill rate [**0.5 to 1.5 gpm**] <Insert value>.

Control: [Push button] [Foot pedal] <Insert control>.

Drain: Grid with NPS 1-1/4 tailpiece.

Supply: NPS 3/8 with shutoff valve.

Waste Fitting: ASME A112.18.2/CSA B125.2 “Plumbing Waste Fittings”, NPS 1-1/4 brass P-trap.

Retain "Filter" Subparagraph below only if required.

Filter: One or more water filters complying with NSF 42 “Standards for Water Treatment Systems” and NSF 53 “Drinking Water Treatment Units, Health Effects” for cyst and lead reduction to below EPA standards, with capacity sized for unit peak flow rate.

Cooling System: Electric, with[**precooler,**] hermetically sealed compressor, cooling coil, air-cooled condensing unit, corrosion-resistant tubing, refrigerant, corrosion-resistant-metal storage tank, and adjustable thermostat.

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70 “Standard for Electrical Safety in the Workplace”, by a qualified testing agency, and marked for intended location and application.

Capacities and Characteristics:

Cooled Water: [**5 gph**] [**8 gph**] [**10 gph**] [**14 gph**] <Insert value>.

Ambient-Air Temperature: 90 deg F.

Inlet-Water Temperature: 80 deg F.

Cooled-Water Temperature: 50 deg F.

Cooled-Water Storage: <**Insert gal.**>.

Electrical Characteristics:

Motor Horsepower: [**1/6**] [**1/5**] [**1/4**] <**Insert value**>.

Volts: 120-V ac.

Phase: Single.

Hertz: 60.

Full-Load Amperes: <**Insert value**>.

Minimum Circuit Ampacity: <**Insert value**>.

Maximum Overcurrent Protection: <**Insert amperage**>.

Copy "Pressure Water Coolers" Paragraph below and re-edit for each type of wall-mounted pressure water cooler required.

Insert number to complete drawing designation. Use these designations on Drawings to identify each pressure water cooler.

* + - * 1. Pressure Water Coolers <Insert drawing designation>: Wall mounted[, standard] [, wheelchair accessible][, bottle filler][, vandal resistant].

Standards:

Comply with NSF 61 “Drinking Water Systems Components - Health Effects” and NSF 372 “Drinking Water System Components - Lead Content”.

Comply with ASHRAE 34, "Designation and Safety Classification of Refrigerants," for water coolers. Provide HFC 134a (tetrafluoroethane) refrigerant unless otherwise indicated.

Retain first subparagraph below for wheelchair-accessible, wall-mounted, pressure water cooler.

Comply with UNIFORM CODE A117.1 “Accessible and Usable Buildings and Facilities”.

Design Consultant to review code references and verify that the referenced sections/tables are current. Note that code references shall be based on the current version of the Uniform Code.

Cabinet: [Single] [Bi-level with two attached cabinets] [Bi-level with two attached cabinets and with a bi-level skirt kit], [all stainless steel] [vinyl-covered steel with stainless-steel top] <Insert material>.

Bubbler: One, with adjustable stream regulator, located on each cabinet deck.

Control: [Push button] [Push bar] <Insert control>.

Retain subparagraph below for all non-secure installations.

Bottle Filler: [Sensor] [Push-button] activation with [20-second] <Insert value> automatic shutoff timer. Fill rate [**0.5 to 1.5 gpm**] <Insert value>.

Drain: Grid with NPS 1-1/4 tailpiece.

Supply: NPS 3/8 with shutoff valve.

Waste Fitting: ASME A112.18.2/CSA B125.2 “Plumbing Waste Fittings”, NPS 1-1/4 brass P-trap.

Retain "Filter" Subparagraph below only if required.

Filter: One or more water filters complying with NSF 42 “Standards for Water Treatment Systems” and NSF 53 “Drinking Water Treatment Units, Health Effects” for cyst and lead reduction to below EPA standards; with capacity sized for unit peak flow rate.

Cooling System: Electric, with hermetically sealed compressor, cooling coil, air-cooled condensing unit, corrosion-resistant tubing, refrigerant, corrosion-resistant-metal storage tank, and adjustable thermostat.

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70 “Standard for Electrical Safety in the Workplace”, by a qualified testing agency, and marked for intended location and application.

Capacities and Characteristics:

Cooled Water: [**5 gph**] [**8 gph**] <**Insert value**>.

Ambient-Air Temperature: 90 deg F.

Inlet-Water Temperature: 80 deg F.

Cooled-Water Temperature: 50 deg F.

Cooled-Water Storage: <**Insert value**>.

Electrical Characteristics:

Motor Horsepower: [**1/6**] [**1/5**] [**1/4**] [**1/3**] <**Insert value**>.

Volts: 120-V ac.

Phase: Single.

Hertz: 60.

Full-Load Amperes: <**Insert value**>.

Minimum Circuit Ampacity: <**Insert value**>.

Maximum Overcurrent Protection: <**Insert amperage**>.

Coordinate "Support" Subparagraph below with "Supports" Article.

Support: [Type I Water Cooler Carrier] [Type II Water Cooler Carrier] <Insert carrier>.

Water Cooler Mounting Height: [Standard] [Child] [Handicapped/elderly according to UNIFORM CODE A117.1].

Design Consultant to review code references and verify that the referenced sections/tables are current. Note that code references shall be based on the current version of the Uniform Code.

Copy "Pressure Water Coolers" Paragraph below and re-edit for each type of semirecessed pressure water cooler required.

Insert number to complete drawing designation. Use these designations on Drawings to identify each pressure water cooler.

* + - * 1. Pressure Water Coolers <Insert drawing designation>: Semirecessed[, standard] [, wheelchair accessible].

Standards:

Comply with NSF 61 and NSF 372.

Comply with ASHRAE 34, "Designation and Safety Classification of Refrigerants," for water coolers. Provide HFC 134a (tetrafluoroethane) refrigerant unless otherwise indicated.

Retain first subparagraph below for wheelchair-accessible, semirecessed, pressure water cooler.

Comply with UNIFORM CODE A117.1 “Accessible and Usable Buildings and Facilities”.

Design Consultant to review code references and verify that the referenced sections/tables are current. Note that code references shall be based on the current version of the Uniform Code.

Cabinet: [All stainless steel] [Vinyl-covered steel with stainless-steel top] <Insert material>.

Bubbler: One, with adjustable stream regulator, located on deck.

Retain subparagraph below for all non-secure installations.

Bottle Filler: [**Sensor**] [**Push-button**] activation with [**20-second**] <Insert value> automatic shutoff timer. Fill rate [**0.5 to 1.5 gpm**] <Insert value>.

Control: [Push button] [Push bar] <Insert control>.

Drain: Grid with NPS 1-1/4 tailpiece.

Supply: NPS 3/8 with shutoff valve.

Waste Fitting: ASME A112.18.2/CSA B125.2 “Plumbing Waste Fittings”, NPS 1-1/4 brass P-trap.

Retain "Filter" Subparagraph below only if required.

Filter: One or more water filters complying with NSF 42 “Standards for Water Treatment Systems” and NSF 53 “Drinking Water Treatment Units, Health Effects” for cyst and lead reduction to below EPA standards; with capacity sized for unit peak flow rate.

Cooling System: Electric, with [**precooler,**]hermetically sealed compressor, cooling coil, air-cooled condensing unit, corrosion-resistant tubing, refrigerant, corrosion-resistant-metal storage tank, and adjustable thermostat.

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70 “Standard for Electrical Safety in the Workplace”, by a qualified testing agency, and marked for intended location and application.

Capacities and Characteristics:

Cooled Water: [**8 gph**] [**12 gph**] <**Insert value**>.

Ambient-Air Temperature: 90 deg F.

Inlet-Water Temperature: 80 deg F.

Cooled-Water Temperature: 50 deg F.

Cooled-Water Storage: <**Insert value**>.

Electrical Characteristics:

Motor Horsepower: [**1/6**] [**1/5**] <**Insert value**>.

Volts: 120-V ac.

Phase: Single.

Hertz: 60.

Full-Load Amperes: <**Insert value**>.

Minimum Circuit Ampacity: <**Insert value**>.

Maximum Overcurrent Protection: <**Insert amperage**>.

Support: Mounting frame or brackets for attaching to substrate.

Copy "Pressure Water Coolers" Paragraph below and re-edit for each type of recessed, pressure water cooler required.

Insert number to complete drawing designation. Use these designations on Drawings to identify each pressure water cooler.

* + - * 1. Pressure Water Coolers <Insert drawing designation>: Recessed[, wheelchair accessible].

Standards:

Comply with NSF 61 “Drinking Water Systems Components - Health Effects” and NSF 372 “Drinking Water System Components - Lead Content”.

Comply with ASHRAE 34, "Designation and Safety Classification of Refrigerants," for water coolers. Provide HFC 134a (tetrafluoroethane) refrigerant unless otherwise indicated.

Retain first subparagraph below for wheelchair-accessible, recessed, pressure water coolers.

Comply with UNIFORM CODE A117.1 “Accessible and Usable Buildings and Facilities”.

Design Consultant to review code references and verify that the referenced sections/tables are current. Note that code references shall be based on the current version of the Uniform Code.

Cabinet: All stainless steel.

Bubbler: One, with adjustable stream regulator, located on deck.

Retain subparagraph below for all non-secure installations.

Bottle Filler: [**Sensor**] [**Push-button**] activation with [**20-second**] <Insert value> automatic shutoff timer. Fill rate [**0.5 to 1.5 gpm**] <Insert value>.

Control: [Push button] [Push bar] <Insert control>.

Drain: Grid with NPS 1-1/4 tailpiece.

Supply: NPS 3/8 with shutoff valve.

Waste Fitting: ASME A112.18.2/CSA B125.2 “Plumbing Waste Fittings”, NPS 1-1/4 brass P-trap.

Retain "Filter" Subparagraph below only if required.

Filter: One or more water filters complying with NSF 42 “Standards for Water Treatment Systems” and NSF 53 “Drinking Water Treatment Units, Health Effects” for cyst and lead reduction to below EPA standards; with capacity sized for unit peak flow rate.

Cooling System: Electric, with [**precooler,**]hermetically sealed compressor, cooling coil, air-cooled condensing unit, corrosion-resistant tubing, refrigerant, corrosion-resistant-metal storage tank, and adjustable thermostat.

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70 “Standard for Electrical Safety in the Workplace”, by a qualified testing agency, and marked for intended location and application.

Capacities and Characteristics:

Cooled Water: [**8 gph**] [**12 gph**] <**Insert value**>.

Ambient-Air Temperature: 90 deg F.

Inlet-Water Temperature: 80 deg F

Cooled-Water Temperature: 50 deg F.

Cooled-Water Storage: <**Insert value**>.

Electrical Characteristics:

Motor Horsepower: [**1/6**] [**1/5**] <**Insert value**>.

Volts: 120-V ac.

Phase: Single.

Hertz: 60.

Full-Load Amperes: <**Insert value**>.

Minimum Circuit Ampacity: <**Insert value**>.

Maximum Overcurrent Protection: <**Insert amperage**>.

Ventilation Grille: Stainless steel, located [**above**] [**below**] water cooler.

Support: Mounting frame for attaching to substrate.

Copy "Bottle Filling Station" Paragraph below and re-edit for each type of surface-mounted bottle filling station required.

Insert number to complete drawing designation. Use these designations on Drawings to identify each bottle filling station.

* + - * 1. Bottle Filling Station <Insert drawing designation>: Surface mounted[, standard][, wheelchair accessible][, vandal resistant].

[Manufacturers:](http://www.specagent.com/Lookup?ulid=13547) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

Oasis International.

Approved equivalent.

Standards:

Comply with NSF 61 “Drinking Water Systems Components - Health Effects” and NSF 372 “Drinking Water System Components - Lead Content”.

Comply with ASHRAE 34, "Designation and Safety Classification of Refrigerants," for water coolers. Provide HFC 134a (tetrafluoroethane) refrigerant unless otherwise indicated.

Retain first subparagraph below for wheelchair-accessible bottle filling station.

Comply with UNIFORM CODE A117.1 “Accessible and Usable Buildings and Facilities”.

Design Consultant to review code references and verify that the referenced sections/tables are current. Note that code references shall be based on the current version of the Uniform Code.

Cabinet: [All stainless steel] [Vinyl-covered steel with stainless-steel top] <Insert material>.

Bottle filler: [**Sensor**] [**Push button**] activation with [**20-second**] <Insert value> automatic shut-off timer. Fill rate [**0.5 to 1.5 gpm**] <Insert value>.

Drain: Grid with NPS 1-1/4 tailpiece.

Supply: NPS 3/8 with shutoff valve.

Waste Fitting: ASME A112.18.2/CSA B125.2 “Plumbing Waste Fittings”, NPS 1-1/4 brass P-trap.

Retain "Filter" Subparagraph below only if required.

Filter: One or more water filters complying with NSF 42 “Standards for Water Treatment Systems” and NSF 53 “Drinking Water Treatment Units, Health Effects” for cyst and lead reduction to below EPA standards; with capacity sized for unit peak flow rate.

If cooling is not required, see Section 224713 "Drinking Fountains" for selection. Cooling system shall be recessed adjacent to Bottle Filling Station or located remote with interconnecting piping.

Cooling System: Electric, with hermetically sealed compressor, cooling coil, air-cooled condensing unit, corrosion-resistant tubing, refrigerant, corrosion-resistant-metal storage tank, and adjustable thermostat.

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70 “Standard for Electrical Safety in the Workplace”, by a qualified testing agency, and marked for intended location and application.

Capacities and Characteristics:

Cooled Water: [**5 gph**] [**8 gph**] <**Insert value**>.

Ambient-Air Temperature: 90 deg F.

Inlet-Water Temperature: 80 deg F.

Cooled-Water Temperature: 50 deg F.

Cooled-Water Storage: <**Insert value**>.

Electrical Characteristics:

Motor Horsepower: [**1/6**] [**1/5**] [**1/4**] [**1/3**] <**Insert value**>.

Volts: 120-V ac.

Phase: Single.

Hertz: 60.

Full-Load Amperes: <**Insert value**>.

Minimum Circuit Ampacity: <**Insert value**>.

Maximum Overcurrent Protection: <**Insert amperage**>.

Coordinate "Support" Subparagraph below with "Supports" Article.

Ventilation Grille: Stainless steel.

Support: Mounting frame for attaching to substrate.

Bottle Filling Station Mounting Height: [Standard] [Child] [Handicapped/elderly according to UNIFORM CODE A117.1].

Design Consultant to review code references and verify that the referenced sections/tables are current. Note that code references shall be based on the current version of the Uniform Code.

Copy "Bottle Filling Station" Paragraph below and re-edit for each type of in-wall mounted bottle filling station required.

In-wall Bottle Filling Stations may be paired with other recessed Pressure Water Coolers.

Insert number to complete drawing designation. Use these designations on Drawings to identify each bottle filling station.

* + - * 1. Bottle Filling Station <Insert drawing designation>: In-wall mounted[, standard][, wheelchair accessible][, vandal resistant].

Standards:

Comply with NSF 61 “Drinking Water Systems Components - Health Effects” and NSF 372 “Drinking Water System Components - Lead Content”.

Comply with ASHRAE 34, "Designation and Safety Classification of Refrigerants," for water coolers. Provide HFC 134a (tetrafluoroethane) refrigerant unless otherwise indicated.

Retain first subparagraph below for wheelchair-accessible bottle filling station.

Comply with UNIFORM CODE A117.1 “Accessible and Usable Buildings and Facilities”.

Design Consultant to review code references and verify that the referenced sections/tables are current. Note that code references shall be based on the current version of the Uniform Code.

Cabinet: [All stainless steel] [Vinyl-covered steel with stainless-steel top] <Insert material>.

Bottle filler: [Sensor] [Push button] activation with [20-second] <Insert value> automatic shut-off timer. Fill rate [**0.5 to 1.5 gpm**] <Insert value>.

Drain: Grid with NPS 1-1/4 tailpiece.

Supply: NPS 3/8 with shutoff valve.

Waste Fitting: ASME A112.18.2/CSA B125.2 “Plumbing Waste Fittings”, NPS 1-1/4 brass P-trap.

Retain "Filter" Subparagraph below only if required.

Filter: One or more water filters complying with NSF 42 “Standards for Water Treatment Systems” and NSF 53 “Drinking Water Treatment Units, Health Effects” for cyst and lead reduction to below EPA standards; with capacity sized for unit peak flow rate.

If cooling is not required, see Section 224713 "Drinking Fountains" for selection.

Cooling System: Electric, with hermetically sealed compressor, cooling coil, air-cooled condensing unit, corrosion-resistant tubing, refrigerant, corrosion-resistant-metal storage tank, and adjustable thermostat.

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70 “Standard for Electrical Safety in the Workplace”, by a qualified testing agency, and marked for intended location and application.

Capacities and Characteristics:

Cooled Water: [**5 gph**] [**8 gph**] <**Insert value**>.

Ambient-Air Temperature: 90 deg F.

Inlet-Water Temperature: 80 deg F.

Cooled-Water Temperature: 50 deg F.

Cooled-Water Storage: <**Insert value**>.

Electrical Characteristics:

Motor Horsepower: [**1/6**] [**1/5**] [**1/4**] [**1/3**] <**Insert value**>.

Volts: 120-V ac.

Phase: Single.

Hertz: 60.

Full-Load Amperes: <**Insert value**>.

Minimum Circuit Ampacity: <**Insert value**>.

Maximum Overcurrent Protection: <**Insert amperage**>.

Coordinate "Support" Subparagraph below with "Supports" Article.

Ventilation Grille: Stainless steel.

Support: Mounting frame for attaching to substrate.

Bottle Filling Station Mounting Height: [Standard] [Child] [Handicapped/elderly according to UNIFORM CODE A117.1].

Design Consultant to review code references and verify that the referenced sections/tables are current. Note that code references shall be based on the current version of the Uniform Code.

* + - 1. SUPPORTS
				1. Type I Water Cooler Carrier:

Standard: ASME A112.6.1 “Floor-Affixed Supports for Off-The-Floor Plumbing Fixtures for Public Use”.

* + - * 1. Type II Water Cooler Carrier:

Standard: ASME A112.6.1 “Floor-Affixed Supports for Off-The-Floor Plumbing Fixtures for Public Use”.

1. EXECUTION
	* + 1. EXAMINATION
				1. Examine roughing-in for water-supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before fixture installation.
				2. Examine walls and floors for suitable conditions where fixtures will be installed.
				3. Proceed with installation only after unsatisfactory conditions have been corrected.
			2. INSTALLATION
				1. Install fixtures level and plumb according to roughing-in drawings. For fixtures indicated for children, install at height required by authorities having jurisdiction.
				2. Set freestanding pressure water coolers on floor.
				3. Install off-the-floor carrier supports, affixed to building substrate, for wall-mounted fixtures.
				4. Install mounting frames, affixed to building construction, and attach recessed, pressure water coolers, and in-wall bottle filling stations to mounting frames.
				5. Install water-supply piping with shutoff valve on supply to each fixture to be connected to domestic-water distribution piping. Use ball or gate valve. Install valves in locations where they can be easily reached for operation. Valves are specified in Section 220523.12 "Ball Valves for Plumbing Piping" and Section 220523.15 "Gate Valves for Plumbing Piping."
				6. Install trap and waste piping on drain outlet of each fixture to be connected to sanitary drainage system.
				7. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons where required to conceal protruding fittings. Comply with escutcheon requirements specified in Section 220518 "Escutcheons for Plumbing Piping."
				8. Seal joints between fixtures and walls using sanitary-type, one-part, mildew-resistant, silicone sealant. Match sealant color to fixture color. Comply with sealant requirements specified in Section 079200 "Joint Sealants."
			3. CONNECTIONS

Coordinate piping installations and specialty arrangements with Drawings and with requirements specified in piping systems. If Drawings are explicit enough, these requirements may be reduced or omitted.

* + - * 1. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.
				2. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."
				3. Install ball or gate shutoff valve on water supply to each fixture.[**Install valve upstream from filter for water cooler.**] Comply with valve requirements specified in Section 220523.12 "Ball Valves for Plumbing Piping" and Section 220523.15 "Gate Valves for Plumbing Piping."
				4. Comply with soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."
			1. ADJUSTING
				1. Adjust fixture flow regulators for proper flow and stream height.
				2. Adjust pressure water-cooler temperature settings.
			2. CLEANING
				1. After installing fixture, inspect unit. Remove paint splatters and other spots, dirt, and debris. Repair damaged finish to match original finish.
				2. Clean fixtures, on completion of installation, according to manufacturer's written instructions.
				3. Provide protective covering for installed fixtures.
				4. Do not allow use of fixtures for temporary facilities unless approved in writing by Director’s Representative.

END OF SECTION 224716