

Part 1 General

1.1 DESCRIPTION

- .1 Therapeutic pool equipment, including filtering, heating, circulating, and sterilizing components as designated in this section

1.2 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 45 00 - Quality Control.
- .3 Section 01 78 00 - Closeout Submittals.

1.3 REFERENCES

- .1 American Society of Mechanical Engineers (ASME):
 - .1 B1.20.1-83(R2006) Pipe Threads, General Purpose;
 - .2 B16.5-03 Pipe Flanges and Flanged Fittings;
 - .3 B16.9-03 Factory-Made Wrought Steel Butt welding Fittings
 - .4 B16.11-05 Forged Fittings, Socket-Welding and Threaded
 - .5 B16.23-02(R2006) Cast Copper Alloy Solder Joint Drainage Fittings
 - .6 B16.24-06 Bronze Pipe Flanges and Flanged Fittings, Class 150 and 300
- .2 American Society for Testing and Materials (ASTM):
 - .1 A47/A47M-99(R2004) Ferritic Malleable Iron Castings
 - .2 B32-04 Solder Metal
 - .3 B61-02 Steam or Valve Bronze Castings
 - .4 B62-02 Composition Bronze or Ounce Metal Castings
 - .5 F439-06 Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
 - .6 F441/F441M-02 Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
- .3 American Welding Society (AWS):
 - .1 A5.1/A5.1M-04 Filler Metals for Brazing
- .4 Manufacturers Standardization Society (MSS) of the Valve and Fitting Industry, Inc.:
 - .1 SP-80-03 Bronze Gate, Globe, Angle and Check Valves

1.4 SUBMITTALS

- .1 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.

Part 2 Products

2.1 HOT TUB

- .1 Vacuum formed acrylic shell reinforced with fibreglass resins Dimensions: 3660 L x 2330 W x 1080 H. Contractor to provide additional on-site bracing support under steps and seats.
- .2 Shell shall have the following fittings:
 - .1 12 Large hydrotherapy jets.
 - .2 12 Medium hydrotherapy jets.
 - .3 1 Wide mouth skimmer.
 - .4 2 Built in bottom drain sump with removable grate.
 - .5 2 Air control valves.
 - .6 1 Water level tank fitting with remote water level control tank.
 - .7 3 Filtered water return inlets.
- .3 Hot tub to be insulated with a coating of polyurethane foam, factory plumbed and hydrostatically tested.
- .4 Recommended HCSP-4 mechanical support system to include:
 - .1 1 3/4 HP filter pump
 - .2 1 150 s.f. cartridge filter 9
 - .3 1 5 HP hydrotherapy booster pump
 - .4 1 15 kW electric heater c/w flow switch.
 - .5 2 inline thermometers c/w thermowell
 - .6 1 inline flowmeter
 - .7 1 Link chemistry controller
 - .8 1 Brominator/Hypochlorinator with normally closed solenoid valve
 - .9 Acid feed pump with 16 gal. solution tank c/w lid
 - .10 10 minute timer for jet pump c/w contractor
 - .11 Water level controller with overflow (located at the shell)
 - .12 VA2000 Vacuum release devices (ASME A112.1917-2002)
- .5 Warranty to be 5 years on shell structure, 2 years on the acrylic surface, and 1 year on plumbing, mechanical equipment and accessories.
- .6 Acceptable Product: Hydrother 12 person, H1200C. Colour Caribbean Quarite. Or approved alternate in accordance with B6.

2.2 GAS REGULATOR

- .1 Medium duty single-stage regulator.
- .2 Acceptable Product: Air Liquide, Blueshield 48 Series or approved alternate in accordance with B6.

2.3 WATER CHEMISTRY CONTROLS

- .1 Provide for continuous monitoring and control of sanitizers and pH levels.
- .2 Acceptable Product: BECsyst 3 or approved alternate in accordance with B6.

2.4 CO2 Flow Control

- .1 CO2 Flow Control unit complete with necessary tubing and Injection diffuser assembly. Flow Control unit shall be suitable for wall mounting.
- .2 Acceptable Product: Nemato Corp, National Line or approved alternate in accordance with B6.

2.5 FLOW METER

- .1 Clamp on insertion mount, dual GPM/LPM scale. Cast acrylic body. Mounted on straight run of pipe as far as possible from any disturbances.
- .2 Acceptable Product: Blue White Industries: F300 series for horizontal pipe; U300,D300 series for vertical pipe. Or approved alternate in accordance with B6.

2.6 HYPOCHLORINATOR

- .1 30 pound tablet storage capacity for commercial spas with chemical controller 500 gallons or larger. UL listed components including: 1HP Pump, flow meter, float valve, check valve, chlorine tablet hopper solution tank.
- .2 Acceptable Product: PPG PowerBase 1030 or approved alternate in accordance with B6.

2.7 HIGH RATE SAND FILTER

- .1 1/2 - 3 HP Range, Integrated top diffuser, unitized corrosion proof filter tank, multilateral under drain assembly, with integral moulded drain plug.
- .2 Acceptable Product: Hayward Pro Series or approved alternate in accordance with B6.

2.8 PUMP

- .1 Acceptable Product: Hayward Super II Pump, VM, or approved alternate in accordance with B6.

Part 3 Execution

3.1 INSTALLATION

- .1 Install therapeutic pool equipment as per manufacturer's instruction and under the supervision of manufacturer's qualified representative and as shown on drawings.
- .2 Caulk watertight pool inlets.

- .3 Install flow meter on filtered water supply pipe to hot tub.
- .4 Installation and activation of chlorinator shall be under direct supervision of a qualified representative of manufacturer of apparatus.

3.2 DEMONSTRATION AND TRAINING

- .1 Train pool personnel in accordance with Section 01 79 00 Demonstration and Training.
- .2 Water chemistry training shall be provided to the facility maintenance personnel to educate the user on how to maintain the pool and properly care for the pool water.

3.3 CLEANING

- .1 Perform cleaning after installation to manufacturer's instructions.
- .2 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

3.4 TESTING

- .1 Conduct performance test, in the presence of the Contract Administrator, to show that all hot tub equipment and control devices operate properly and in accordance with design and specification requirements.

END OF SECTION