

Hydrotherapy Pools and Spas

Typical Specification



The following pages include a typical specification (in the Construction Specification Institute format). This specification is intended to be used as part of a project or as a stand-alone specification for the purchase of a swimming pool, aquatic facility or water feature item.

This specification is not proprietary or intended to limit competition. To the contrary, the purpose of this specification is to establish the minimum performance and quality standards. The use of this specification does not preclude other manufacturers or suppliers from bidding. In fact, the use of a comprehensive and detailed specification ensures that the purchaser or owner actually receives the expected quality and performance required.

Natare recommends that purchasers understand their needs, specify the item that meets their requirements and demand that all potential suppliers meet those minimum requirements.

Please contact Natare for assistance in selecting and specifying your swimming pool, aquatic facility or water feature items.

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PART 1 - GENERAL**1.1 SUMMARY**

The method of therapy pool construction techniques and design specified herein, and shown on the drawings, is the basis for receiving bids and is the preference of the Owners. It is not the intent of these specifications to, in any way, limit competition or restrict the bidder in the preparation of their bid. It is assumed, unless otherwise stated, that the bidder is offering exactly the equipment, products and quantities of items specified herein and is totally obligated to furnish that equipment in literal compliance with these specifications. Substitute system(s) must be approved by the Architect/Engineer a minimum of ten (10) days prior to the bid opening date by submitting a full equipment list of all items they intend to supply. This list should contain therapy pool construction techniques, materials and system structural data, engineering calculations and other pertinent data as outlined in the specifications. Said request for substitution should include a detailed explanation of why a substitute is being requested. In the event an alternate system is approved, Contractors will be advised per addendum prior to the bid opening allowing all Contractors a fair and equitable opportunity to include such systems or equipment in their bids.

1.2 The Therapy pool system shall be a Stainless Steel pool in combination with a perimeter overflow recirculation system. The combined system is a proprietary product produced by Natare Corporation, Indianapolis, Indiana. All other aspects, equipment and construction within the project have been designed to utilize its principles. No alternates will be accepted under this base bid as they could adversely affect the ultimate performance of the system.

1.3 SCOPE OF WORK:

The therapy pool construction system specified hereinafter consists of an all stainless steel pre-fabricated sidewall with an integrally formed filter water supply duct and perimeter overflow channel, as detailed on the drawings. The stainless steel sidewall system shall be joined to a stainless steel pool bottom in the dimensions and slopes indicated on the drawings. The stainless steel floor (bottom) shall include main drain boxes with integral flange connections and glass fiber composite grating. The entire system shall be flush, with no protrusions, to ensure accurate pool dimensions. The stainless steel wall shall be supported by a mild steel A-frame buttress system and horizontal support members engineered to withstand the forces of water when the pool is full. The therapy pool system shall rest upon the steel beams or columns, or a concrete under slab furnished by others, as noted on the plans.

The stainless steel perimeter recirculation system consists of an overflow gutter (skimming weirs optional), a supply tube with multiple jet inlets disposed about the perimeter of the pool, a stainless steel gutter collector and supply converter box(es) at locations indicated on the drawings. The entire system shall be built as a single unit with all steel and stainless steel components welded together as indicated on the drawings. All welds must be located to eliminate scarring, distortion or welding marks on the horizontal face of the gutter.

A. Deck equipment and other pool accessory items, as detailed in other specifications, including all anchors, inserts and sleeves shall be furnished in the types described in that section and quantities shown on the drawings for installation by the _____ as noted.

- B. Anchors, if utilized, shall be furnished to the appropriate Contractor as designated herein for installation as directed on the Manufacturer's location plan.
- C. Related therapy pool work and responsibilities have been assigned to the various trades or are being assumed by the Owner. The following areas of work which are associated with the therapy pool system are not the responsibility of the therapy pool system installer and are to be provided by other Contractors or by the Owner in accordance with the specifications herein and detailed notations on the drawings.
- .01 Building permit fees, licenses and Health Department approvals.
 - .02 Temporary utilities, safety and site requirements
 - a. Provide temporary water at 50-psi minimum for cleaning, rinsing and test purposes, as well as facilities for draining pool and maintaining workable conditions within the excavated area.
 - b. Provide temporary electrical and lighting as required to the pool site.
 - c. Provide and maintain all necessary barricades, signs, lights and flares, as required, to protect workmen and the public.
 - d. Provide access to site for pre-fabricated materials and for accomplishing erection of pool.
 - e. Provide adequate protection of finished pool until total project is complete.
 - .03 Layout and locations—layout horizontal dimensions and initial grade elevations from established lines and benchmarks.
 - .04 Main steel or concrete supporting beams, columns or members
 - .05 Sub-drainage system, provided
 - .06 Hoisting of pool components and equipment
 - .07 Concrete works, including but not limited to footers for buttress supports, footers for deck equipment, manhole sumps, surge tanks and other cast-in-place or pre-cast concrete members.
 - .08 Storage of pool components and equipment at the worksite
 - .09 Supporting steel framing, including bolt holes for pool anchoring (or concrete support, if applicable)
 - .10 Perimeter sealant between pool and deck slab
 - .11 Installations of deck and accessory equipment
 - .12 Plumbing work, including fresh water and waste lines
 - .13 Electrical work, including grounding of pool, installation of underwater lights or other components
 - .14 Paint and coatings of the pool structure or shell are specified herein.
 - .15 Protection during and after installation
 - a. Immediately after installation, protect therapy pool from damage, contamination, spatter and spillage caused by construction work of other trades. This shall include covering of the pool with protective

- materials, when necessary, and responsibility for prompt repair or corrective measures in the event of damage.
- b. Do not permit heavy equipment within 10' of pool wall or any pool component.
 - c. Do not permit placement of any acid or alkaline material in contact with the pool structure.
 - d. Do not permit connection or the hanging of pipe, electrical conduit or other materials to the pool system without prior written approval of the pool installer.
- .16 Provide verification of initial and ongoing engineering review of structural capacity and integrity of the building, to ensure adequacy of the structure to receive the support of the therapy pool
- D. At time of start-up, the Owner shall furnish operating personnel, or a designated representative, to meet with the representative for the Therapy Pool Contractor and receive instruction in proper operation of all equipment and systems specified herein.

PART 2: PRODUCTS

2.1 MANUFACTURER

The system specified herein, as manufactured by Natare Corporation of Indianapolis, Indiana, shall be the basis for materials, procedure and technical quality.

2.2 COMPONENTS

Unless otherwise specified, all stainless steel parts are to be fabricated of 12-gauge, low-carbon, certified 304 stainless steel, polished to a #3 finish.

- A. **Stainless Steel Wall Panels:** The stainless steel sidewalls shall be shop fabricated in a manner to ensure that no cutting by the installer will be necessary in order to meet vertical dimension requirements. The top of each upper wall panel shall be bent to a 45 degree angle in order to form the "V" notch when welded to the supply tube. Wall panels shall be fabricated and shipped in 10' lengths.
- B. **Stainless Steel Pool Floor:** The stainless steel pool floor (bottom) shall consist of leveled and trued sheets. It shall join the pool sidewall via a 2" angular cove which intersects the sidewall at the floor junction. The stainless steel floor shall be sloped or contoured as indicated on the plans and shall rest upon a grid system of horizontal steel support members and/or a concrete under slab.
- C. (Optional) **Underwater Lights:** Underwater lights and niches shall be provided at locations shown on the plans.
- D. (Optional) **Stainless Steel Steps:** The entire inside surface, will be a slip-resistant surface. All other portions of the step shall have a 2B finish. All exposed joints are to be welded and ground smooth.
- E. (Optional) **Stainless Steel Stairway:** A stairway shall be furnished to the dimensions and configuration detailed on the drawings. The stairway shall be supported by an integral mild steel support system and buttress. If necessary, the stairway shall include provisions for the attachment of a handrail.

Appropriate transition sections shall be provided, so as not to interfere with perimeter system operation.

2.3 WARRANTIES & GUARANTEES

The therapy pool system shall be guaranteed by the Manufacturer for a period of five (5) years. The guarantee shall include all labor and material for replacement of any defective material or work, but shall not include or cover abusive or improper treatment to the re-circulating system by others during either the construction period or when operational.

2.4 ENGINEERING SERVICES

The therapy pool system supplier shall provide a full set of installation drawings, certified if requested, showing all features of the system construction and indicating proper sizing and locations along with complete dimensional details.

The equipment manufacturer shall supply the services of a competent and experienced field engineer to inspect the completed installation, adjust the automatic controls to the proper set points, place the system in operation and give operating instructions relative to its care and use.

PART 3: EXECUTION

3.1 All work under this section shall be performed by an authorized licensee of the system's manufacturer or as directed by said licensee so that the complete system will operate in accordance with the intent of the specifications and to provide the Owner with a safe, economical, operating and sanitary swim facility.

3.2 All equipment unloading, storage and installation is the responsibility of the _____. Proper care is to be taken at all times to protect the equipment from exposure and handling damage.

3.3 The system installer shall inspect all previous and contiguous work for dimensional accuracy and/or other variations that will adversely affect the execution and/or quality of the therapy pool system.

A. Tolerance of floor steel framing system or concrete under slab with reference to benchmark shall be + 1/4".

B. Report unsatisfactory conditions to the proper authority. The therapy pool system installer shall not start work until all conditions are corrected by trade or trades responsible.

3.4 Additional foundation and/or structural work required for the placement and operation of systems other than that so noted herein or on the drawings shall be provided at the direction of the therapy pool installer under the contract.

3.5 The _____ Contractor shall erect a steel support system of beams and columns, or a concrete under slab, of adequate size and configuration to support the entire weight of pool system and water. Adequate calculations and documentation as to structural capacity shall be furnished to the equipment manufacturer prior to installation. Support framing shall be installed by the _____ Contractor to the dimensions of the plans.

A. The entire system is to be set level, true and squared to dimensions as noted on drawings.

B. All installation is to be performed by skilled technicians (welders with at least five (5) years experience in field welding stainless steel recirculation systems). If

requested, the Contractor shall submit the installer's experience in writing to the Architect for approval prior to ordering the re-circulating system. All work is to be performed in accordance with the manufacturer's technical bulletins. Should the requirement of these bulletins contradict this or any other section of the specifications, the procedures called for in the bulletin shall govern.

- C. All welding shall be performed in accordance with the procedures established by the manufacturer. All exposed weld beads shall be cleaned to a smooth uniform finish. All exposed weld beads shall be flush, smooth and uniform with a minimum of irregularities. All splatter must be removed. Welds shall be cleaned, and all burn and discoloration removed. Interior welds made on the underside of an exposed surface must be completed so that there is no noticeable discoloration, burn-through or sugaring on the exposed face. No grinding of any welds will be permitted.
- D. Installation shall be performed by a licensee of the manufacturer. The stainless steel sidewalls shall be erected on a heavy steel frame consisting of a series of structural angle buttresses welded to anchors attached to the supporting beams or a concrete under slab and installed around the entire outside of the therapy pool perimeter. Buttresses shall be erected a maximum of 5' apart.
- E. Upon completion of wall and gutter installation, the supply tube shall be pressure tested (before the jet inlets have been drilled) at 5-psi air pressure and shall be maintained for four (4) hours. During the four (4) hour period, all joints shall be soap tested. Pressure testing shall be done by the installer.
- F. After the stainless steel re-circulating system has been installed on the therapy pool wall, the contractor shall form a joint between the pool deck and the gutter channel. The top edge of the joint shall be filled with a rubber based sealing compound equal to Permapol RC Reservoir Sealant. This seal shall have a minimum depth and width of 1/2".
- G. The installation shall be in accordance with approved shop drawings which shall be furnished by the therapy pool system's manufacturer. The pre-fabricated bottom and sidewall sections shall be carefully placed, leveled, aligned, assembled, welded and braced to the embedded anchors. Therapy pool walls and the perimeter overflow lip shall be straight, plumb and level within specified tolerances.
 - .01 Vertical tolerance for pool walls and perimeter systems shall be +1/8" per 100' lineal dimension.
 - .02 Horizontal tolerance for gutter overflow lip and gutter members shall be 1/4" per 100'.
 - .03 Horizontal tolerance for therapy pool bottom when filled and ready for operation shall be 1" with reference to benchmark or pool water line.

3.6 FIELD QUALITY CONTROL

All field welds shall be water pressure tested to reveal pinholes, cracks and similar defects. This procedure includes pre-cleaning, pool filling, inspection and repair of any defects. A field test of all peripheral lines shall be completed as detailed earlier in this specification. After all testing is complete, thorough cleaning of the therapy pool and preparation for the application of the (optional) paint coat shall be in accordance with the manufacturer's recommendations.

- A. Upon completion of all installation work, the therapy pool shall be hydrostatically tested to insure the integrity of the pool structure and to demonstrate that the pool is leak proof. Fill pool to the maximum operating level with clean water. After fill is complete, observe for 24 hours for leaks or other changes. Upon successful completion of the 24 hour test, turn over therapy pool to general contractor or owner for draining or start up.
- 3.7 (OPTIONAL) PAINTING
- Apply at least two coats of Kopper's "Type A" swimming pool paint, or equal, in a color as chosen by the Architect in strict accordance with the manufacturer's instructions. Apply necessary depth and safety markings subsequent to painting. Warranty paint installation for a period of not less than two years or two pool seasons.



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