

STIP3 Cathodically Protected Underground Storage Tanks

Modern Welding underground tanks have the unique Sti-P3 triple protection system developed by the Steel Tank Institute.

Modern Welding's Sti-P3 tanks are available for any size job, ranging from 500 to 50,000 gallon capacity. The system is pre-engineered and your tank is completely fitted at our plant, so it will need no special handling during loading, shipment or off-loading at your site. The protection system is self-activating and entirely automatic. Since the introduction of the protection system in 1969, this system has provided long term protection for underground storage tank structures.

Modern Welding Sti-P3 tanks are competitively priced, and you can feel confident in the fact that everything Modern Welding does, carries the full backing of over 75 years of experience.

Modern Sti-P3 tanks meet EPA requirements, and are made in accordance with Underwriter's Listed specifications (Laboratories Std. #58 and UL #1746). They also meet or exceed codes for the storage of hazardous materials (NFPA #30 and #31), the Uniform Fire Code and American National Standards Inst. B137.1-1971. Further information on Modern Welding Sti-P3 tanks is available upon request.

STEP 1: PROTECTIVE COATING.

The first step in the Sti-P3 system is applying a tough, long-lasting coating to seal the tank's steel against attack from aggressive soil conditions and moisture. First we sandblast the tank to remove dirt, oil and mill scale. And we apply the tough dielectric coating by airless spray, carefully controlled to maintain high standards of thickness and coverage.

STEP 2: CATHODIC PROTECTION.

Then we attach high-potential magnesium or zinc anodes to the tank, reversing any DC current flow which might result from stray ground current or reaction between different metals. We pre-engineer the size and placement of the anodes on each tank, according to the tank's surface area. The anodes are pre-packed in a special fill material to increase their efficiency.

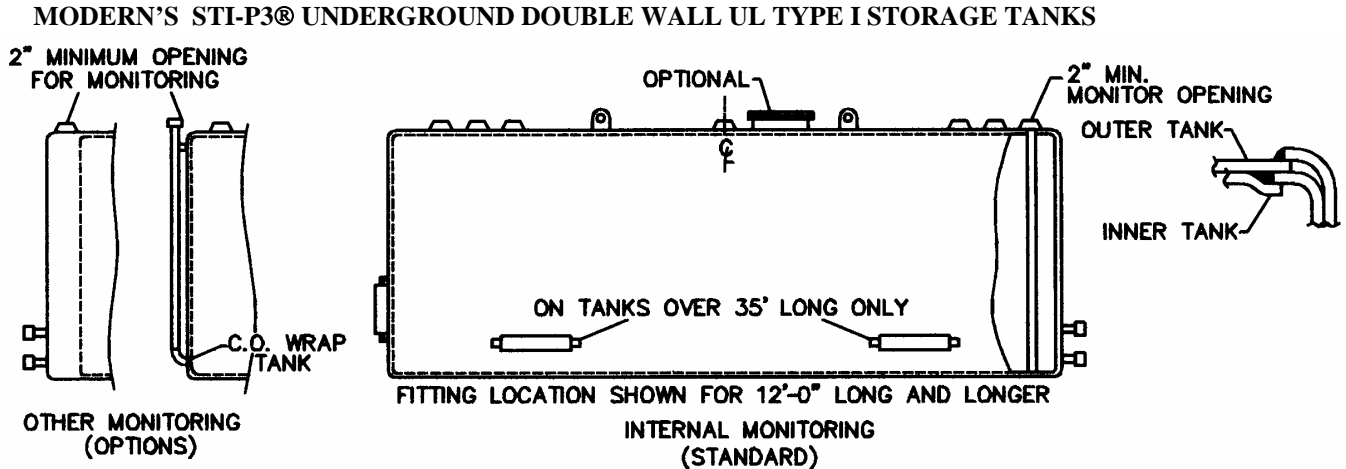
STEP 3: ELECTRICAL ISOLATION.

Stray currents could attack the tank through its piping connections. So we install special insulating bushings in all openings, to electrically isolate the tank. The bushings are custom-made especially for the Sti-P3 system, with a low profile to prevent damage during shipment and installation. The tough, sturdy dielectric bushing material resists knocks, gasohol, gasoline and gasoline vapors and is impervious to water, salt and detergents.

Three steps, designed to work together to provide enduring protection. Years in the development, Sti-P3 gives your tank total protection.

MODERN WELDING STI-P3 A PROVEN THREE-PART PROTECTION SYSTEM.

Modern Sti-P3 tanks meet EPA requirements and are made in accordance with Underwriter's Listed specifications (Laboratories Std. #58 and UL#1746). Available in Single Wall or Double Wall.



APPROX. CAPACITY (GALLONS)	INNER TANK	
	NOM. DIAMETER	NOM. LENGTH
560	48"	6'-0"
1,120	48"	12'-0"
1,000	64"	6'-0"
2,000	64"	12'-0"
3,000	64"	18'-0"
4,000	64"	24'-0"
4,000	96"	10'-8"
6,000	96"	16'-0"
8,000	96"	21'-4"
10,000	96"	26'-8"
12,000	96"	32'-0"
15,000	96"	40'-0"
10,000	120"	17'-0"
15,000	120"	25'-6"
20,000	120"	34'-1"
20,000	126"	31'-0"
25,000	126"	38'-10"
30,000	126"	46'-6"
40,000	144"	47'-3"
50,000	144"	59'-6"

Tank lengths listed above are based on nominal tank dimensions.
Overall tank lengths will vary during actual manufacturing.

STANDARD SPECIFICATIONS

- Built per UL 58 and sti-P3® tank specifications. Tanks will bear UL and sti-P3 labels.
- Modern's standard 2000 opening locations and required lifting lugs.
- Exterior is coated per sti-P3 requirements.
- Anode type, quantity and location may vary by size of tank. (Weld-on anodes shown.)
- Striker plates provided under all fitting openings.
- Optional manway with and without fitting openings in cover.
- Interior coating systems available upon request.
- Other tank sizes available upon request.

LONG FORM: Section 13215

Guide Specification

Modern Welding Company STIP3 Double Wall, Steel Underground Storage Tank

PART I General

1.01 Related Work Specified in Other Sections

- A. Cast-in-Place Concrete: Section 03300
- B. Anchor Bolts: Section 05501
- C. Plastic Pipe: Section 15064
- D. Liquid Level Gauges: Section 15174

1.02 Quality Assurance

- A. Acceptable Manufacturer: Modern Welding Company Subsidiary.
- B. Governing Standards
 1. U.L. 58, Underwriters Laboratories, Inc., Steel Underground Tanks for Flammable and Combustible Liquids.
 2. ANSI B137.1-1971.
 3. Steel Tank Institute, F961, Specification for External Corrosion Protection of Steel Underground Storage Tanks.
 4. U.L. 1746, Underwriters Laboratories, Inc., Corrosion Protection Systems for Underground Storage Tanks.
 5. NFPA 30 and 30A, National Fire Protection Association Flammable and Combustible Liquids Code.
 6. Uniform Fire Code, International Fire Code Institute.
 7. PEI/RP100, Petroleum Equipment Institute, Recommended Practices for Installation of Underground Liquid Storage Systems.

1.03 Submittals

- A. Shop Drawings: Contractor shall submit _____ copies of shop drawings for each tank. Location of fittings and accessories with specific dimensions shall be shown on all drawings.
- B. Catalog Data: Contractor shall submit _____ current copies of manufacturer's literature.
- C. Certification: Each tank shall bear the U.L. Listing Mark for coated underground tank for flammable liquid storage and the UL-58 label for corrosion protection of underground storage tanks.
- D. Installation Instructions: Contractor shall submit _____ copies of manufacturer's current installation instructions.

PART II Products

2.01 Modern STIP3 Underground Storage Tank

A. Loading Conditions: Tank shall meet the following design criteria.

1. Surface Loads: When installed according to manufacturer's installation instructions, tank shall withstand surface H-20 axle loads (32,000 lbs./axle).
2. Internal Load: Tank shall withstand an air pressure test of 3-5 psi.
3. Tank shall be designed to support accessory equipment such as ladders, submerged pumps, containment sumps, etc. when installed according to the manufacturer's instructions and limitations.
4. Tank shall be designed in accordance with the Underwriters Laboratories, Inc. UL-58 / UL-1746 standard.

B. Product Storage Requirements

1. Tank shall be capable of storing liquids with specific gravity up to 1.
2. Tank is designed for operation at atmospheric pressure only. All tanks shall be vented.
3. Tank shall be capable of storing gasoline, gasohol, jet fuel, avgas, diesel fuel or methanol at ambient underground temperature or used for fuel oil at temperatures not to exceed 120 degrees Fahrenheit.

C. Dimensional Requirements

1. Nominal capacity of the tank shall be ____ gallons.
2. Nominal outside diameter of the tank shall be ____ inches.
3. Overall length of the tank shall be approximately ____ feet, ____ inches.

2.02 Accessories

A. Certification Plate: Underwriters Laboratories label and STIP3 label shall be affixed to each tank.

B. Fittings - NPT

1. All threaded fittings shall be of a material of construction consistent with the requirements of the Underwriters Laboratories listing. All fittings shall be protected using threaded plugs or suitable covers.
2. Standard fittings shall be 4" NPT forged steel weld flanges. (If required by regulation, 5" NPT forged steel weld flanges with 5" x 4" nylon dielectric bushings may be used).

3. Location: Refer to drawings for location.

C. Interior Ladder: If required, supplied by tank manufacturer and designed to provide for tank deflection.

D. Manways (optional):

1. All manways shall be furnished with U.L. listed gaskets, bolts, and covers.
2. Location: Refer to drawings.

E. Containment Piping Sump (optional):

1. As required, sump may be used for secondary containment at the submerged pump location.

F. Interior Paint and Coating: If required, see Paint Section.

G. Anchor Straps: If required, provide flat carbon steel anchor straps or other approved anchoring material as recommended by the tank manufacturer for each tank. The number, size and location shall be as that shown on the contract drawings. A suitable dielectric material shall be placed between the steel strap and tank at time of installation.

H. Lifting Lugs: Suitably designed and located lifting lugs shall be provided with each tank and be capable of sustaining the tank weight with a 2:1 safety factor.

PART III Execution

3.01 Installation

A. Tanks shall be installed in strict accordance with the most recent installation instructions provided by the tank manufacturer, PEI/RP100, NFPA 30, UFC, local ordinance, or other applicable codes.

3.02 Testing

A. Tank shall successfully complete an air pressure test of 3-5 psi prior to or at the completion of installation.

B. A volumetric test should be performed on the entire storage system prior to being placed into operation.

SUBSIDIARIES:

Corporate Office (270) 685-4400

Subsidiaries:

Modern Welding Company of Owensboro, Inc.
Owensboro, KY (270) 683-5323

Modern Welding Company of Ohio, Inc.
Newark, OH (740) 344-9425

Modern Welding Company of Florida, Inc.
Orlando FL (407) 843-1270

Modern Welding Company of Texas, Inc.
Houston, TX (713) 675-4211

Modern Welding Company of Texas, Inc.
Rhome, TX (817) 636-2215

Modern Welding Company of Iowa, Inc.
Burlington, IA (319) 754-6577

Modern Welding Company of California, Inc.
Fresno, CA (559) 275-9353

Modern Welding Company of Georgia, Inc.
Augusta, GA (706) 722-3411

FORM: STIP3 DW

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