



Sump Tanks

HT-1155

Sump Tanks are designed to receive, store, and pump liquid wastes and oily wastewater from equipment drains and building floor drains. These liquid wastes originate at natural gas compressor stations, crude oil pumping stations, and terminals that store and handle petroleum products, chemicals, and other products.

Inadvertent discharges of these liquids have the potential to cause ground water contamination or threaten public health and the environment.

Sometimes referred to as drain, slop, or collection tanks, these double-wall "tight" tanks are available for either aboveground or underground installations.

Sump Tanks are classified as either 'Open' or 'Closed'. Generally, Sump Tanks for open drain systems are atmospheric and those for closed systems are pressurized. Therefore, their design, fabrication, and operation is highly dependent on application and project specifications.

Applications

- Natural Gas Facilities for:
 - Processing
 - Transmission
 - Compression
 - Metering
 - Storage
- Crude Oil, Refined Product, and NGL Pumping Stations
- Oil and Gas Terminals
- Bulk Storage Facilities
- Petroleum Loading/Unloading Facilities
- Natural Gas Power Plants
- Petrochemical Manufacturing Facilities
- Industrial Facilities
- Transportation Related Facilities

Highland Tank's extensive experience in the fabrication of Sump Tanks help us meet the demanding needs of our energy and industrial customers. Count on Highland Tank for complete pre-packaged systems for one-stop shopping.

Open Sump Tank Systems

Atmospheric 'Open' Sump Tanks

A drain system that collects liquids that spill on the ground is an 'atmospheric,' 'gravity,' or 'open' drain. Liquids gathered in an open drain system are typically indoor floor drainage, wash-down water, or rainwater contaminated with oil.

Separated oils are usually circulated back into the pipeline while the remaining liquids from the Sump Tank are routinely removed and sent off-site for processing and proper disposal.

Atmospheric Sump Tanks are typically fabricated to UL 58 and UL 1746 for underground installation; UL 142 or API 650 Annex J for aboveground installation. Various volumes and configurations are available. Construction is of coated carbon steel or stainless-steel and are single-wall or double-wall with interstitial leak detection.

These sump tanks are also designed for underground, semi-underground (partially buried), or aboveground installation. Aboveground sump tanks are saddle mounted for stable, long-term installation or skid-mounted for easy relocation and reuse. A wide range of options to equip the tank for a specific application are available.

Standard Atmospheric Sump Tanks are supplied with connections for:

- Assorted Inlets
- 24" Tight Bolt Manway W/8" Flange on Lid (for Thief Gauge/Inspection Hatch)
- Striker Plates
- Pressure Vacuum Relief Valve
- Level Switches
- Level Indicating Transmitter
- Outlet (Pump out with Internal Suction Pipe)
- Vent with Flame Arrestor
- Electronic Leak Detection Sensor

Tanks also include:

- Interior Polyurethane or Epoxy Lining
 - Grit Blast prior to coating
- Exterior HighGuard Polyurethane Coating
- Grounding Lug
- Lifting Lugs

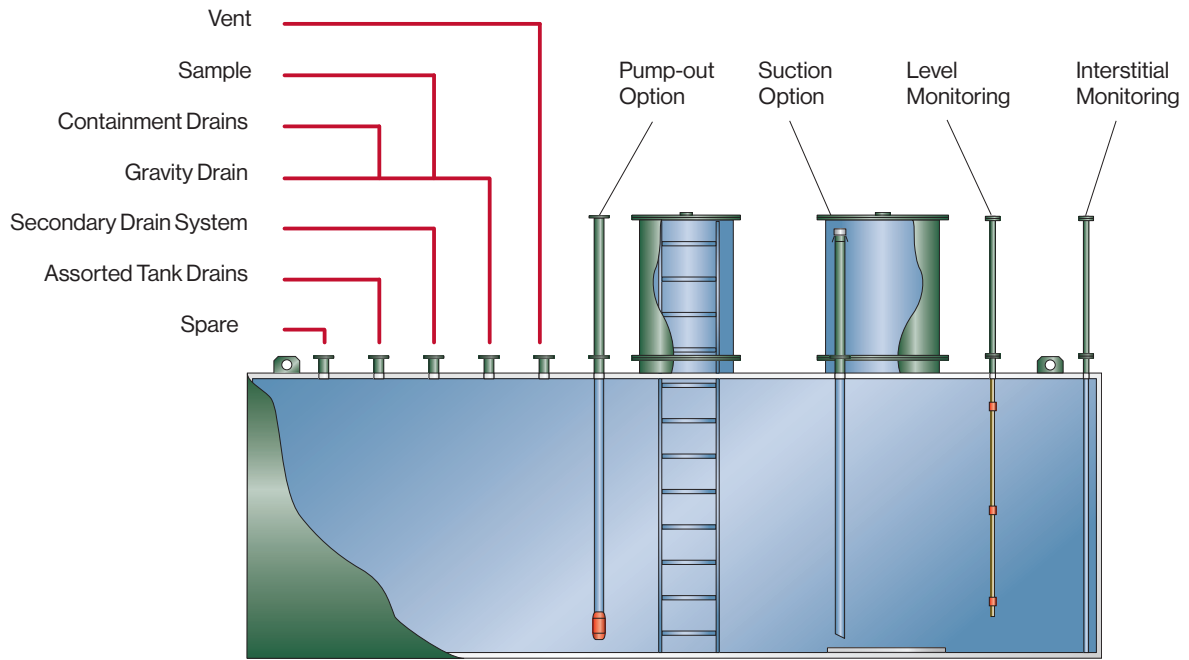
Options & Accessories

- Integral Simplex or Duplex Pump(s) with automatic level controls and alarm/control panel to transfer the waste liquids for further handling. Pump, Pump Outlet, Access, and Mounting Plate size to be determined based on pump selection and site requirements.
- Anchoring System
- PE Stamp (Structural)



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Drawing and Sizing Information



Typical fittings are shown. Type, diameter and location TBD. All fittings are 150# RFSO unless otherwise noted.

Volume Gallons	Nominal Dimensions	
	Diameter	Length
185	3'-2"	3'-4"
240	3'-2"	4'-0"
300	3'-2"	5'-0"
500	4'-0"	5'-5"
1,000	4'-0"	10'-9"
1,000	5'-4"	6'-0"
1,500	5'-4"	9'-0"
2,000	5'-4"	12'-0"
2,500	5'-4"	15'-0"
3,000	5'-4"	18'-0"
4,000	5'-4"	24'-0"
4,000	6'-0"	19'-0"
4,000	8'-0"	10'-8"
5,000	6'-0"	23'-10"
5,000	8'-0"	13'-4"
6,000	6'-0"	28'-8"
6,000	8'-0"	16'-0"
8,000	10'-0"	14'-0"
8,000	8'-0"	21'-4"

Volume Gallons	Nominal Dimensions	
	Diameter	Length
10,000	10'-0"	17'-0"
10,000	8'-0"	26'-8"
12,000	10'-0"	20'-6"
12,000	8'-0"	32'-0"
15,000	10'-0"	25'-6"
15,000	8'-0"	40'-0"
20,000	10'-0"	34'-0"
20,000	10'-6"	31'-0"
25,000	10'-0"	42'-6"
25,000	10'-6"	38'-9"
30,000	10'-0"	51'-2"
30,000	10'-6"	46'-6"
40,000	12'-0"	47'-6"
50,000	12'-0"	59'-6"
50,000	12'-6"	54'-6"
60,000	12'-0"	71'-0"
60,000	12'-6"	65'-5"
60,000	13'-0"	60'-6"
70,000	13'-0"	72'-0"



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Closed Sump Tank Systems

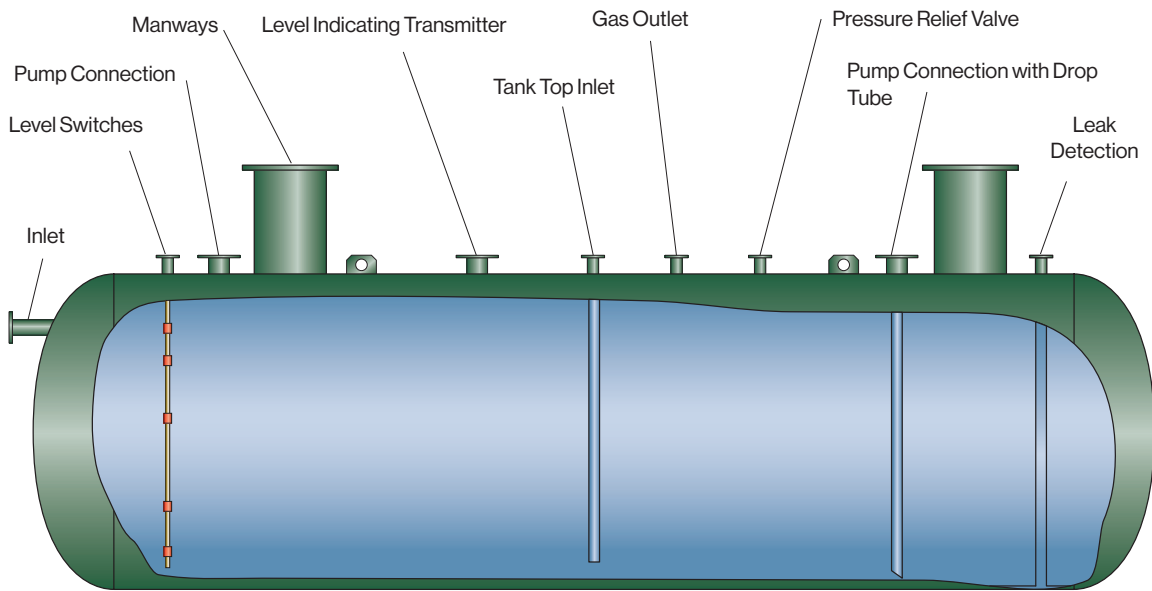
ASME Closed 'Pressure Sump Tanks

A drain system that is connected directly to pressure vessels is called a 'pressure' or "closed" drain system. The liquid in a closed drain system must be assumed to contain dissolved gases that flash in the drain system and can become a hazard if not handled properly. Thus, closed drain systems should always be routed to an ASME Pressure Sump Tank.

Closed Pressure Sump Tanks are fabricated and labeled to ASME Boiler and Pressure Vessel Code Section VIII, Division 1 standards.

As each ASME pressure vessel application is unique, specific vessel construction requirements are calculated using a formula that takes into consideration steel thickness, vessel diameter, design/operating pressure, and joint efficiency.

- Available in a wide range of volumes and configurations.
- Designed for underground, semi-under ground, or aboveground installation
- Coated carbon steel or stainless-steel construction.
- Single or double-wall construction with interstitial leak detection.
- Fittings, manways, automatic level controls, level indicating transmitters, pressure vacuum relief valves, and other assorted options available upon request.



Please consult Highland Tank for Pressure Sump Tank volumes and dimensions. Typical fittings are shown. Type, diameter and location TBD. All fittings are 150# RFSSO unless otherwise noted.



Stoystown, PA
One Highland Rd.
Stoystown, PA 15563
(814) 893-5701

Manheim, PA
4535 Elizabethtown Rd.
Manheim, PA 17545
(717) 664-0600

Watervliet, NY
958 19th St.
Watervliet, NY 12189
(518) 273-0801

Greensboro, NC
2700 Patterson St.
Greensboro, NC 27407
(336) 218-0801

Friedens, PA
1510 Stoystown Rd.
Friedens, PA 15541
(814) 443-6800

Clarkston, MI
4701 White Lake Rd.
Clarkston, MI 48346
(248) 625-8700

Mancelona, MI
9517 Lake St.
Mancelona, MI 49659
(231) 587-8412