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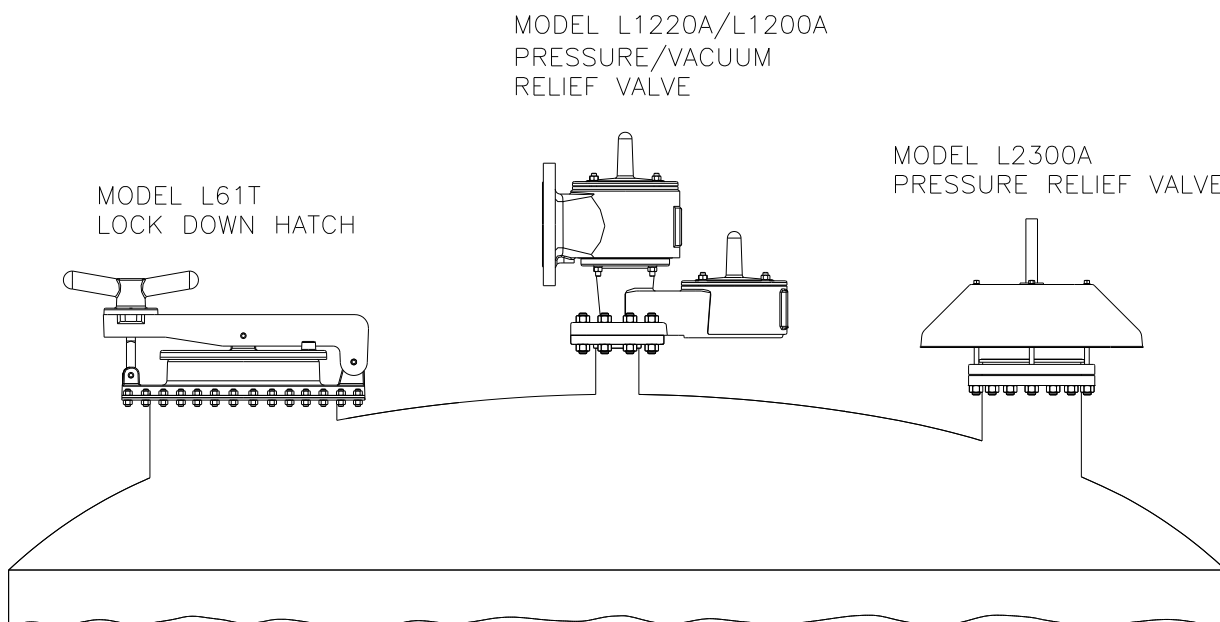
## INTRODUCTION

The Lock Down Hatch provides secure access to storage tanks without pressure or vacuum relief capability. When closed, it ensures a vapor tight seal that prevents leakage and evaporation loss. The latch mechanism allows for the use of a padlock or security seal.

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## DESIGN AND FUNCTION



**Figure 1: Typical Tank Installation**

A typical tank installation is shown in **Figure 1** which includes the following LAMOT products:

Model L61T Lock Down Hatch

Model L1200A/L1220A Pressure/Vacuum Weight Loaded Valve

Model L2300A Pressure Weight Loaded Valve

## SAFETY WARNINGS

This section is an overview of safety guidelines that should be followed during the installation, operation and maintenance of the LAMOT Lock Down Hatch. To understand the context of these instructions and warnings, it is necessary to completely read and understand the contents of this manual.

DO NOT attempt to remove the Lock Down Hatch from the tank or process vessel without first bleeding all pressure from the system.

## INSPECTION AND STORAGE

The Lock Down Hatch is carefully packaged to prevent damage or contamination during shipping. Inspect all equipment when it is received; report any damage to the carrier immediately. The hatch should be protected during handling and storage. Before installation, inspect the unit for indications of physical damage or internal contamination. If these are observed, the hatch must be disassembled, cleaned and repaired before installation.

## INSTALLATION

A typical Lock Down Hatch installation on a tank or vessel is illustrated in **Figure 1**, Page 3. **WARNING: The Lock Down Hatch must be installed in a vertical position as shown in Figure 1, Page 3.** Torque guidelines are listed in **Table 1**. The hatches are NOT rated for full flange pressure and do not require high bolting torque. Consult factory for special applications.

The following guidelines should be observed at installation:

1. Inspect the gasket seating surface of the tank nozzle flange. It must be clean, flat and free of scratches, corrosion and tool marks.
2. Aluminum valves are furnished as a standard with flat face flanges; they should only be installed on a mating flat face flange with a full faced gasket. Note: 1/8" thick full faced non-asbestos gaskets are recommended for aluminum.
3. Inspect the gasket; make sure that the material is suitable for the application.
4. Lubricate all bolts and nuts with an appropriate thread lubricant. If the valve will see high temperature service or if stainless steel fasteners are used, apply an anti-seize compound such as moly-disulfide.
5. Center the gasket within the bolt circle.
6. Set the hatch carefully on the nozzle and install the bolts and nuts.
7. Torque all fasteners to half the value listed in **Table 1**, in a cross torqueing pattern.
8. Make sure that the flanges are not distorted and that the gasket is evenly compressed. Make up the final torque and check that no further nut rotation occurs at the torque value specified in **Table 1**.

**Table 1 - Recommended Torque Values\***

Mounting Flange	Bolt Torque Lb-Ft(N-m)	Number of Bolts	Bolt Specifications	
	Flat Face- Alum.		Thread	Bolt Length
8" API 12 Bolting	25 (34)	16	1/2-13 UNC-2B	1.50"
8" 150# ASME Bolting	66 (89)	8	3/4-10 UNC-2B	3.00"

\*Note: Torque values are based on a gasket factor  $m=3.5$ , Gasket factor  $y=2000$  psi, maximum pressure = 2 psi.

## **MAINTENANCE**

Maintenance should be performed every (6) six months or more frequently in corrosive or dusty environments. Normal maintenance should consist of inspecting both the lid gasket and the base gasket. Under normal operating conditions, the lid gasket should be replaced annually. To ensure efficient operation, the lid gasket and the seat should be wiped down each time the hatch is accessed.

## **PRODUCT LIMITED WARRANTY**

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