

Prefabricated Deadmen Installation Instructions

For Fiberglass Underground Storage Tanks and Oil/Water Separators

1. GENERAL

1.1. These instructions supplement the Anchoring Tanks section of the Xerxes Installation Manual and Operating Guidelines (subsequently referred to as "Installation Manual"). They apply to pre-engineered, prefabricated deadmen supplied by Xerxes.

1.2. It is important to follow the procedures and instructions in the Installation Manual in order to safely and properly install a Xerxes underground storage tank and accessories. Failure to follow those instructions may void the tank warranty and cause tank failure, death, serious personal injury or property damage.

1.3. Deadmen help anchor tanks in installations in which there is potential for a high water table or trapped water.

1.4. Deadmen come in various lengths. Generally, there are 1 to 4 deadman sections per side of the tank, with both sides having an equal number.

2. ANCHORING TANKS

2.1. Xerxes Prefabricated Deadmen

2.1.1. Xerxes-supplied prefabricated deadmen are pre-engineered and sized to the tank ordered and include galvanized adjustable anchor points (subsequently referred to as "anchor points"). As with any deadman, water-table height, number of attached collar risers and burial depth must be considered in sizing the deadman system.

2.2. Placement of deadmen

2.2.1. The minimum spacing between tanks must be increased as needed to accommodate deadmen.

2.2.2. Always provide sufficient clearance to allow the deadmen to be set outside of the tank "shadow." See Tank Spacing subsection in the Excavation Parameters section of the Installation Manual. (See FIGURE 2-1.)

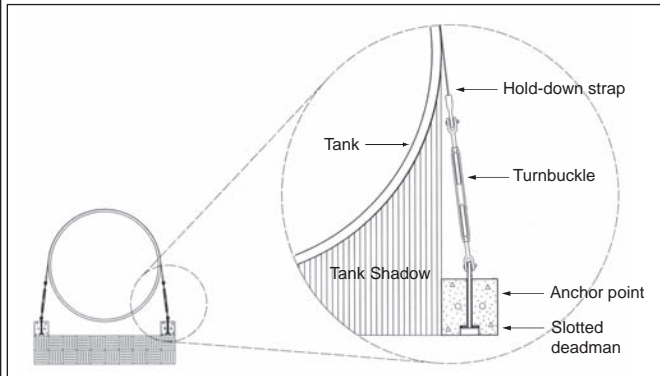


FIGURE 2-1

2.2.3. When multiple sections are used, the deadmen are to be butted together end-to-end on each side of the tank.

WARNING

Only use the anchor points when lifting and positioning the deadmen. A spreader bar may be required to lift longer sections of deadmen. Use guy ropes to guide the deadmen when lifting. Failure to do so could result in death or serious injury.

2.3. Positioning of anchor points

2.3.1. Xerxes deadmen are supplied with 3/4-inch-diameter anchor points.

These anchor points protrude up through the slots in the deadmen and are temporarily supported with cotter pins. (See FIGURE 2-2.)

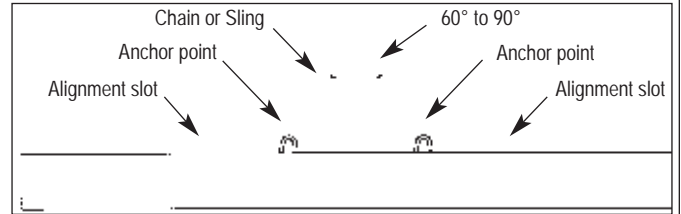


FIGURE 2-2

2.3.2. Use only one strap per anchor point.

2.3.3. Align the anchor points with the hold-down strap locations on the tank (marked by arrowhead symbols). See Anchoring Tanks section of the Installation Manual.

2.3.4. When using deadmen in man-out-of-hole strapping applications, align the anchor points with the proper ribs before setting the deadmen in the hole.

2.3.5. Care should be taken to keep backfill from entering the alignment slots until final adjustment is made. Placing something (for example, a piece of wood) over the slots during backfill placement may help keep backfill from entering the alignment slots.

2.4. Installation of deadmen

2.4.1. The top of the deadmen should be aligned to the bottom of the tank.

2.4.2. The deadmen are typically placed directly on the excavation floor.

2.4.3. If Xerxes 18-inch wide low-profile deadmen are used as a construction guide, they may need to be elevated. This can be accomplished by putting 3-1/2 inch of backfill or a wood 4x4 (or equivalent) underneath, so that the top of the deadmen are 12 inches off of the bottom of the excavation. (See FIGURE 2-3.)

2.4.4. Make sure the anchor points are positioned correctly.

2.4.5. Some contractors use the deadmen as a guide for proper depth of bedding. (Note that low-profile deadmen are not 12 inches high.)

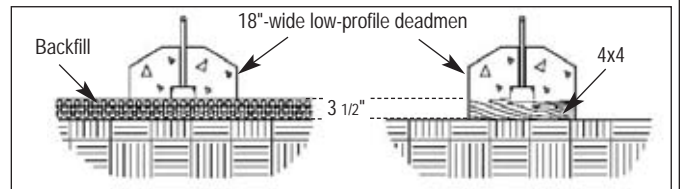


FIGURE 2-3

3. OPTIONAL TURNBUCKLES

3.1. General

3.1.1. Xerxes also offers a turnbuckle (See FIGURE 3-1.) that will connect the deadman anchor point to the Xerxes FRP hold-down strap. When the deadman is properly positioned, this will eliminate the use of cables and cable clamps. See Hold-down Straps subsection in the Anchoring Tanks section of the Installation Manual for more detail. (Also see FIGURE 2-1.)

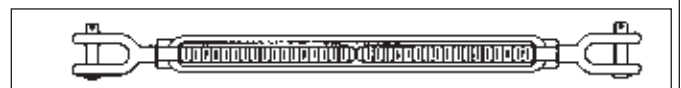


FIGURE 3-1

XERXES[®]
CORPORATION

7901 Xerxes Avenue South, Minneapolis, MN 55431-1288 ■ (952) 887-1890 ■ Fax (952) 887-1882 ■ www.xerxescorp.com

Deadmen Dimensions

Nominal Tank Capacity (Gallons)	Number of Deadmen	Width x Depth of a Deadman (Inches)	Length of a Deadman (Feet)	Weight of a Deadman (Pounds/each)	Number of Straps Required
4' - 600	2	12 x 12	12	1,800	2
4' - 1,000	2	12 x 12	12	1,800	2
4' - 1,500	2	12 x 12	12	1,800	2
6' - 1,500	2	12 x 12	12	1,800	2
6' - 2,000	2	12 x 12	12	1,800	2
6' - 3,000	2	12 x 12	16	2,400	2
6' - 4,000	2	12 x 12	18	2,700	2
6' - 5,000	4	12 x 12	12	1,800	4
6' - 6,000	4	12 x 12	16	2,400	4
8' - 2,000	2	12 x 12	12	1,800	2
8' - 3,000	2	12 x 12	12	1,800	2
8' - 4,000	2	12 x 12	12	1,800	2
8' - 5,000	2	12 x 12	16	2,400	2
8' - 6,000	2	12 x 12	18	2,700	2
8' - 7,000	4	12 x 12	12	1,800	4
8' - 8,000	4	12 x 12	12	1,800	4
8' - 9,000	2	12 x 12	16	2,400	4
	2		12	1,800	
8' - 10,000	4	12 x 12	16	2,400	4
8' - 11,000	4	12 x 12	16	2,400	4
8' - 12,000	4	12 x 12	18	2,700	4
8' - 13,000	4	12 x 12	16	2,400	6
	2		12	1,800	
8' - 14,000	4	12 x 12	16	2,400	6
	2		12	1,800	
8' - 15,000	6	12 x 12	16	2,400	6
10' - 10,000	2	18 x 8 3/4	22	3,000	4
10' - 11,000	2	18 x 8 3/4	22	3,000	4
10' - 12,000	2	18 x 8 3/4	22	3,000	4
10' - 13,000	4	18 x 8 3/4	14	1,900	4
10' - 14,000	4	18 x 8 3/4	14	1,900	4
10' - 15,000	4	18 x 8 3/4	14	1,900	4
10' - 16,000	2	18 x 8 3/4	18	2,400	4
	2		14	1,900	
10' - 17,000	2	18 x 8 3/4	18	2,400	4
	2		14	1,900	
10' - 18,000	4	18 x 8 3/4	18	2,400	4
10' - 19,000	4	18 x 8 3/4	18	2,400	4
10' - 20,000	4	18 x 8 3/4	18	2,400	6
10' - 22,000	4	18 x 8 3/4	22	3,000	8
10' - 25,000	4	18 x 8 3/4	14	1,900	8
	2		18	2,400	
10' - 30,000	6	18 x 8 3/4	18	2,400	10
10' - 35,000	4	18 x 8 3/4	22	3,000	12
	2		18	2,400	
10' - 40,000	8	18 x 8 3/4	18	2,400	14