

Application

Herculon Type D Tank Top (HLD/TT) Bearings (see Fig 3-17) have been developed to fulfil the need for an easily installed low friction bearing under roof beams of water tanks. They are particularly useful where loads are small and both lateral and uplift forces need to be accommodated. They can also be used in other light structures.

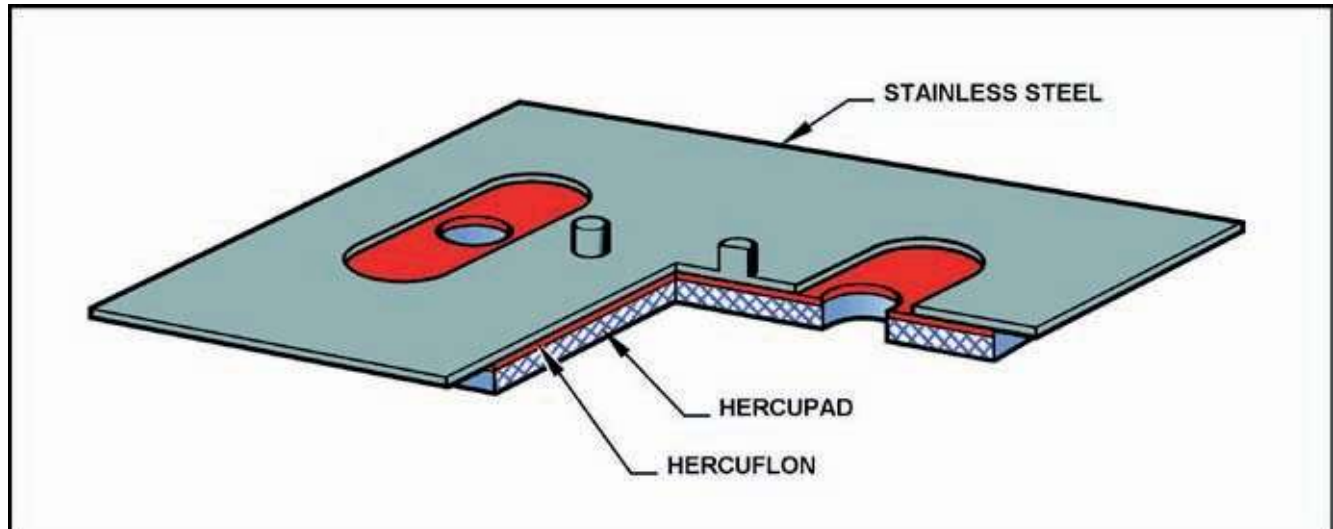


Fig 3-17 Herculon Type D Tank Top Bearing

Materials

The *HLD/TT* bearing consists of a thin stainless steel slide plate with two stainless steel studs flash welded to the upper face. The lower face is highly polished and the plate is provided with two slotted holes for uplift through-bolts. This plate slides against a *Hercuflon* coated *Hercupad* which has two clearance holes drilled in it.

Types

There is only one type of *HLD/TT* bearing available but it is available in five sizes depending upon working load requirements (see Table 3-10). Bearings having larger capacities or of different dimensions than those listed can be designed by our Technical Department.

Design

The following design limitations are recommended:

- Coefficient of friction 0.05 - 0.08 depending on stress.
- Expansion capacity up to ± 20 mm.
- Maximum rotation up to 0.01 radians.
- Maximum temperature 80°C.

Installation

Fig 3-18 shows a *HLD/TT* bearing installed on a steel or concrete water tank. Before leaving our factory, the two components are taped together to prevent damage to the low friction surfaces during transit. This tape should be removed before installation.

The *HLD/TT* bearing should be installed as shown in Fig 3-18 and in accordance with the following instructions:

1. Cast-in bolts or chemset anchors should be installed as required by the engineer.
2. Prepare a nominal 10 mm thick mortar pad such that the level does not vary more than 2 mm from a straight edge placed in any direction across the seating.
3. The beam flange needs to be provided with slotted holes and two 10 mm diameter through holes to locate the stainless steel studs.
4. The cast-in bolts should be provided with a heavy steel washer, nut and locknut. The nuts should be pulled finger tight and then locked with the locknut.

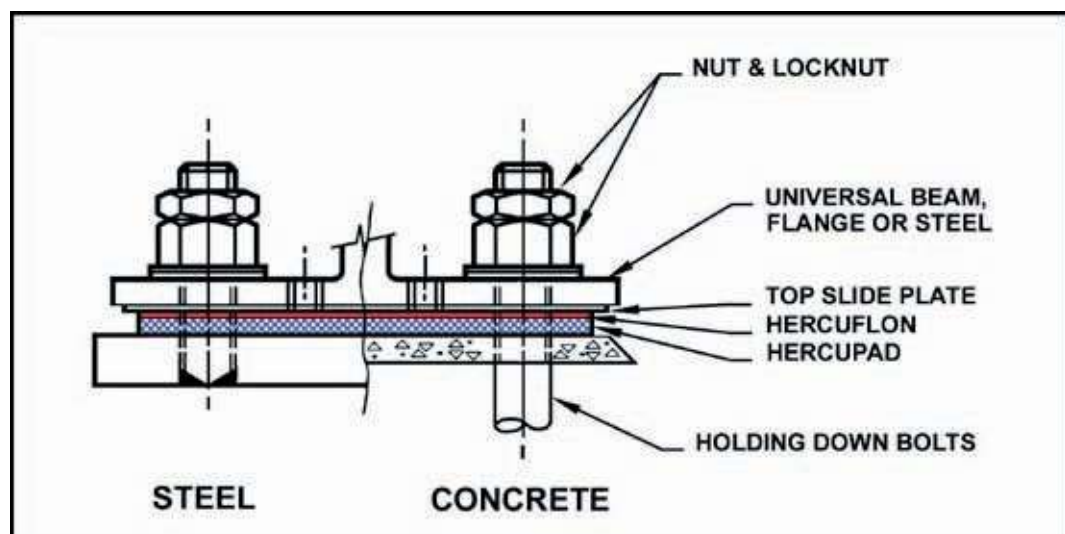


Fig 3-18 Installation of a Herculon Type D Tank Top Bearing

Ordering

Table 3-10 details the range of sizes available and Fig 3-19 provides the dimension reference points reflected in the table. These bearings are designed to fit standard UNIVERSAL BEAMS. The standard designs incorporate M20 bolts which should be adequate for most applications. Engineers should check that these bolts can accommodate the required uplift and lateral loads.

Table 3-10 Part Numbers for Herculon Type D Tank Top Bearing

Part Number	Working Load (kN)	Universal Beam		Bearing Dimensions (mm)				
		Section	Flange Width (approx mm)	Top Plate (± 20 mm) C x D	Pad 0.01 rads F X G	Hole Centres H	Stud Centres E	Overall Dimensions C x D x H1
HLD/50 (TT)	50	200 UB	133	120 x 130	80 x 125 x 10	70	25	120 x 130 x 12
HLD/55 (TT)	55	250 UB	146	120 x 140	80 x 135 x 10	80	30	120 x 140 x 12
HLD/60 (TT)	60	310 UB & 360 UB	171	120 x 160	80 x 150 x 10	100	40	120 x 160 x 12
HLD/65 (TT)	65	410 UB	178	120 x 170	80 x 160 x 10	110	50	120 x 170 x 12
HLD/70 (TT)	70	460 UB	190	120 x 180	80 x 170 x 10	120	50	120 x 180 x 12

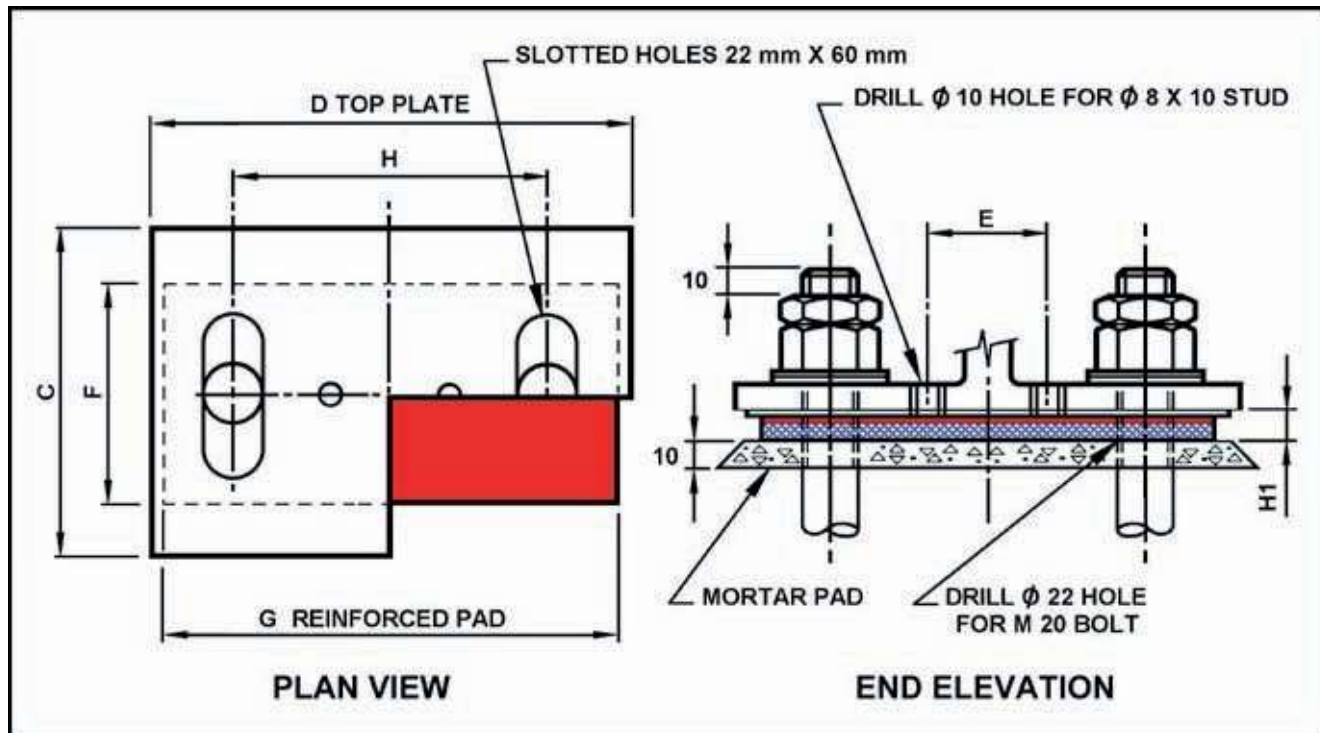


Fig 3-19 Dimension Reference Points