



What is a Tyre Plate Barrier?

Fundamentally, a tyre plate barrier is a safety barrier for raceways, made up of small metal plates, secured onto the left & right (side) exterior of a tyre via bolts.

The design is simple yet effective. Similar in its strategy to a momentum transfer barrier, the tyre plate barrier absorbs the cars impacted energy & moves with the impact of the car without falling drastically out of shape or travelling. To understand the true effectiveness of the barrier the impact process needs to be broken down. The thorough absorption of energy & flexibility is due to the metal plates providing a hinge-like motion to the tyre wall, as all the plates are joined with a tyre in the middle. This motion becomes more apparent & the wall becomes more secure when the barrier consists of a higher volume of tyres in length (i.e. the deflection in a 200m wall is greater than deflection in a 50m wall, due to the length x depth of the barrier.) Therefore due to increased flexibility provided by plate spacing & ultimately hinging motions this process is highly effective.

Assembly Process: Tyre Plate Barrier

Operator will receive: Tyre punch, Bolts & Pre Punched Metal Plates.

Punching the holes in your Tyre: The size holes punched into your tyres will be predetermined in correspondence to the dimensions of the holes in the metal plates provided.

The Tyre Punch

1. The Tyre punch will be set in position (can be modified by operator) to ensure an exact match (to metal plate holes) when punching holes.
2. Two holes are required per tyre on opposite sides of the exterior tyre wall (see operation instruction manual on how to punch holes).
3. Once holes have been punched the assembly of the barrier/wall begins.

Assembly

1. The metal plate is placed on the left & right top exterior of the tyre wall so that the holes on the plate & the holes punched into the tyre are accurately in line.
2. Simply push bolt through the lined up holes.
3. Place second tyre next to bolted plate & line up holes.
4. Push bolt through the lined up holes.
5. Repeat process on the left & right of the tyre wall until barrier is complete.

Note: For added strength or for dense tyre barriers four plates are recommend: for the front, rear & sides of the tyre. This adaption in design should be considered for raceways that prefer a stiffer wall where bounce absorbs impact rather than flexibility.