

= Dive Coaster =

The Dive Coaster is a steel roller coaster manufactured by Bolliger & Mabillard where riders experience a moment of free @-@ falling with at least one 90 @-@ degree drop . Unlike other roller coasters where the lift hill takes the train directly to the first drop , a Dive Coaster lift hill leads to a flat section of track followed by a holding brake which stops the train just as it enters the vertical drop . After a few seconds , the train is released into the drop .

Development of the Dive Coaster began between 1994 and 1995 with Oblivion at Alton Towers opening on March 14 , 1998 , making it the world 's first Dive Coaster . The trains for this type of coaster are relatively short consisting of two to three cars . Bolliger & Mabillard have recently begun to also use floorless trains on this model to enhance the experience . As of May 2016 , ten Dive Coasters have been built , with the newest being Valravn at Cedar Point .

= History =

According to Walter Bolliger , development of the Dive Coaster began between 1994 and 1995 . On March 14 , 1998 , the world 's first Dive Coaster , Oblivion , opened at Alton Towers . Though Oblivion is classified as a Dive Coaster , it does not have a true vertical drop as the drop angle is 88 @. @ 8 @-@ degrees . Two years later , the second Dive Coaster built , Diving Machine G5 , opened at Janfusun Fancyworld and also does not have a vertical drop . In 2005 , SheiKra opened at Busch Gardens Tampa Bay and was the first Dive Coaster to feature a 90 @-@ degree drop and a splashdown element . In 2007 , Busch Gardens Williamsburg announced that Griffon would be the first ever Dive Coaster to feature floorless trains and SheiKra would have its trains replaced with floorless ones . In 2011 , the first ' mini ' Dive Coaster opened at Heide Park Resort , named Krake . Unlike other Dive Coasters , Krake has smaller trains consisting of three rows of six riders .

= Design =

The design of a Dive Coaster can vary slightly from one to another . Depending on the amusement park 's request , one row on the train can seat anywhere from 6 to 10 riders . Stadium seating is also used to give every rider a clear view . Next , compared to standard Bolliger & Mabillard 4 abreast cars , because of the extra weight of each car on a Dive Coaster , the size of the track must be larger than other B & M models (such as the Hyper Coaster) to support the weight . At the top of the primary vertical drop , a braking system holds the train for 3 to 5 seconds , giving riders a view of the drop ahead before being released into the drop .

In the station , Dive Coasters that use non @-@ floorless trains simply use a standard station . With Dive Coasters that use floorless trains , in order to allow riders to load and unload the train , a movable floor is necessary . Because the front row has nothing in front of it to stop riders from walking over the edge of the station , a gate is placed in front of the train to prevent this from happening . Once all the over @-@ the @-@ shoulder restraints are locked , the gate opens and the floor separates into several pieces and moves underneath the station . When the next train enters the station , the gate is closed and the floors are brought back up where the next riders board .

= Installations =

Bolliger & Mabillard has built ten Dive Coasters with one to be opened in 2017 . The roller coasters are listed in order of opening dates .