

Pachyderms on the scale



Zoo Zurich uses a tailor-made weighing platform from METTLER TOLEDO to monitor their elephants' weight. The scale has already passed the crucial test, as all the animals have already been weighed. Despite this, the animals remain a little suspicious when the plate over the weighing cells moves a couple of millimeters.

The elephants at Zoo Zurich have had a safe arrival to their new 107,600 square feet home. METTLER TOLEDO didn't play a part in the move, but in the weighing process. The animals first get to experience the gadget when in the spacious indoor enclosure a scale with an **IND560 weighing terminal** and PDX cells.

An elephant's weight changes over its lifetime and is an important indicator of its health. To date, the gray giants have been weighed every two months, but using a smaller scale. "When doing so, we had to ensure that the elephants were actually standing with all four legs on the scale", comments Robert Zingg, Senior Curator of Zoo Zurich. However, in the new compound, there's no pushing these animals into anything. Life for the elephants is on a par with the true wilderness. For this reason, the scales were placed in the passage between the indoor and outdoor enclosure. This allows the zookeepers to easily weigh the elephants on a weekly basis as planned. "We want to weigh the animals regularly, so that we gain a good level of control over their weight", says Zingg.



The process, from initial contact through to installation of the four PDX cells, was a tough one, taking four years in total. METTLER TOLEDO had to convince the Sales Consultant responsible, Stefan Büchi, to swiftly say goodbye to the truck scales that had been the original idea. Cleaning these scales would have been far too complicated. Another idea, a Pinmount weighing module, was also rejected, as too much straw would probably have got caught up in it. In the end, a bare weighing cell was eventually decided upon.

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The scale is surrounded by a fenced-in area. If the zookeepers then want to weigh a pachyderm, they can let them wander into the area where the scale is and close the fence. "The elephant doesn't need to stand completely still on the scale. The fluctuations resulting from movement can be filtered out" says Büchi. If the elephant has to stand completely still, for example in the event of medical treatment, that isn't a problem, either. In this fenced-in area, also called a "hugger", the elephant can be enclosed in a smaller space by moving a lateral fence. Living in conditions similar to in the wild sometimes calls for a more complex environment.



The PDX weighing cells, on the other hand, are easy to handle. They provide extremely reliable results, are durable, and easy to maintain. The four cells are connected to each other via a robust CAN bus network. The weighing cells, cables, and connections are all watertight. "In theory, it could flood, and it wouldn't matter", says Büchi. A weighing terminal, located next to the scale, is used by the zookeepers to read the weights of the Asian elephants, which weigh up to six tons. Up to now, the zoo has had very positive experiences

using the scale. Unfortunately, the plate lying over the weighing cells is not proving such a hit with the elephants. In terms of construction, it actually only moves a few millimeters.

Heavyweights

On an overcast day in February 2014, the elephant scale was put into operation. The visitors to the zoo will not come into contact with the scale, when the elephant park is officially opened in June. For this reason, a screen is mounted in the visitor area which displays the current weight of the pachyderms. When bull elephant Maxi recently stepped on the scale, it displayed around 5.6 tons – completely normal. The weights of the female animals are also in the green zone. At the zoo, the elephants eat between 4 and 8 lbs of bran every day, 22 to 33 lbs of carrots, apples or fodder beet as well as approximately 4 lbs of feed pellets and 33 lbs of hay. Anyone who eats that much soon puts on a few tons of weight.

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