

Snow-loading and snow-sweeping robots



Cleaning snow from driveway areas around apartment buildings is traditionally done manually. The use of snowplows for cleaning such small areas is economically impractical and difficult due to parked vehicles and complex geometry of the site. However, the described job can be effectively done by a small-sized highly mobile snow-loading robot designed based on the SRX1 platform. Its small dimensions allow the robot to easily clean zones accessible by janitors only. The robot is equipped with a front mounted snow bucket for effective snow cleaning. In addition to removing snow from a flat road surface, the snow bucket allows to move the collected snow and pour it into

one-meter high piles.

A snow-loading robot has an electric drive system to ensure virtually silent running. Even late at night it will not disturb sleeping citizens, which makes the robot suitable for 24-hour operation. Regular snow cleaning helps keeping the pathway surfaces clean with less effort and prevents snow freezing caused by constant snow tramping by pedestrians.

The use of an electric snow-loading robot is very cost efficient. 3 kW of input power is enough for cleaning an area of 100 sq. m. with a snow depth of 5 cm in only one hour. Build-in accumulators can be easily charged without an operator's involvement using a wireless charger.



Weather conditions do not always allow immediate snow removal. Precipitations in the form of snow or rain may lead to the ice formation hidden by a thin layer of snow. In these circumstances it is practical to use a snow broom that will effectively remove snow and partial destruction of ice as well as apply de-icing agents to cause ice dissolution or antiskid mixtures to reduce the coefficient of friction.

A street snow-sweeper robot can successfully manage the above tasks because it is equipped with a snow broom and a

spreader of de-icing agents or antiskid mixtures. Both robots have proved to be effective not only in urban environments, but also for cleaning locations near private residences.

A street sweeper robot has a mechanical broom, which allows it to remove fallen leaves during fall and sweep walkways throughout the year.