Boston Dynamic.

Boston Dynamics are probably one of the more famous robotics companies in the modern age. Whether it is because of the frankly astonishing impressive robots which can, walk, run, lift heavy loads and jump, or the videos of the employees beating up the robots who’s to say. The four robots that they are currently selling or are working on are Spot, Handle, Pick and Atlas.

Spot is probably their most famous robot and one currently in sale. Its dog like physique allows stable movement along multiple terrains while mapping it. The robot can go up and down stairs with ease, with certain models having arms that can open doors increasing its urban terrain capabilities. Spot’s main use is collection of video data in hazardous environments such as construction site, gas sites and Massachusetts State police even looked into using Spot of bomb sites. The investigation carried out by showed potential but that it still is work in progress. A more recent use of spot is helping out at Brigham and Women’s Hospital of Harvard University. Spot has been mounted with a screen with a mic so nurses can take reports from their patients within the hospital and move from different patient’s rooms minimizing the spread of Covid-19 though out the hospital.

Handle and pick were both designed with quick efficient box moving in mind. Pick is a robotic arm that uses deep-learning to find the box location and thinking about the best way to move a box from one place to another. It picks up the boxes uses pneumatic suckers. What Pick is great at doing is recognizing the different types of boxes, the size, colour, what different labels mean and process what to do. Pick’s max movement rate is 720 boxes per hour. Pick wasn’t actually developed by Boston dynamics but they bought the company Kinema Systems and started to integrate Pick into the heaps of research they have in robotic movement to create Handle. Handle is a smaller version of Pick except it has wheels that allow it easily move boxes through different facilities or move boxes onto trucks. It has a max speed is 4mps allowing it move boxes at a good pace. Its max pick rate is 360 boxes per hour.

Atlas is a biped robot designed to replicate the full potential of the human body mobility. Atlas’s mobility is frankly impressive being able to jump over obstacles, do forward rolls, and leap up steps while still maintaining its jogging pace. The parts for Atlas are 3D printed which decreases its weight while still allowing it to be strong. Some version of Atlas have integrated two smaller Picks as hands allowing it to pick up boxes. Atlas’s main functions is for search and rescue, removing debris and other tasks that could potentially injure a human.

All of these robots have been built on by previous robots such as the Big Dog which was their first working quadruped. The Wildcat which could run up to 32 km/h while still being able to turn and manoeuver. The Petman which simulate human movement on a rig with a treadmill. Its designed “to test the performance of protective clothing designed for hazardous environments” by running, squatting and doing jumping jacks to make sure the material is up to scratch.

Boston Dynamics have shown some of the most interesting and impressive robots of the modern era and whatever the future holds for them it surely won’t be boring.

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