
Overview

Q. Is ZeroG registered with the FDA?

Yes, ZeroG is listed with the FDA under Aretech's registration number (3007797030).

Q. Can ZeroG training be billed to healthcare providers and Medicare?

Yes. ZeroG is simply providing a safer environment for the therapist to perform treatment, so they would bill based on what they are doing as if they weren't using ZeroG. For example, if a therapist is working on gait, then it is billed as gait training. If a therapist is working on sit-to-stand or floor transfers it could be billed as therapeutic activities.

Q. What is the difference between ZeroG and a typical ceiling-mounted patient lift?

ZeroG is a high-tech robotic system that provides dynamic body-weight support, trolley tracking and fall protection. ZeroG's robotic trolley automatically moves with the patient so they only feel unloading from above while important training data is recorded in a secure database. Conversely a patient lift is just that. It is used for lifting and transferring patients but cannot provide dynamic body-weight support, the patient must drag the device as they walk and it does not store any training information.

Q. Can ZeroG be used to assist a patient to standing?

Yes. By using the winch, ZeroG can provide up to 450 pounds of lifting power which can be used to assist a 450 pound person to their feet. This function enables a single therapist to get heavier patients to standing.

Q. What steps has Aretech taken to ensure patient safety since ZeroG is a wireless system?

ZeroG uses a powerful, enterprise-grade router, which meets cyber security standards while maintaining fast data transmissions.

Q. What is the heaviest patient that can use ZeroG?

The heaviest patient that can use ZeroG is 450 lbs.

Q. Can ZeroG be used as a patient transfer device?

No. The intended use for ZeroG is gait and balance training. Transporting patients with ZeroG is not possible.

Q. How much body-weight support can ZeroG provide a patient?

ZeroG has two unloading modes. In static body-weight support, the position of the patient is fixed so they are restricted from moving downwards. ZeroG can provide up to 450 lbs of static support. In dynamic body-weight support, the patient can move freely up and down while the level of support stays constant. ZeroG can provide between 10-200 lbs of dynamic support.

Q. Can ZeroG be used on stairs?

Yes. When using dynamic body-weight support, ZeroG keeps the same level of body-weight support as the patient moves up and down the stairs. Even as they traverse up and down, they are protected from falls.

Q. How fast can patients walk while in ZeroG?

ZeroG has a top speed of approximately 5 mph. For individuals who need to walk faster, customers should consider purchasing ZeroG-Passive, which is also an accessory to ZeroG.

Q. What data does ZeroG record from each training session?

The ZeroG software contains a SQL database that is password encrypted. For each training session, important clinical measures are recorded such as distance walked, training minutes, falls prevented, and the minimum and maximum body-weight support. Depending on other activities performed during the session (treadmill training, target matching, games, etc.) there are additional metrics captured.

Q. How can ZeroG be useful for research?

For researchers who require more than clinical measures, ZeroG has a Researcher's Toolkit. ZeroG records system level signals at 1,000 times per second. This is extremely useful during gait studies when the precise rope force and rope angle need to be known throughout the gait cycle.

Q. What safety measures does ZeroG have?

ZeroG includes redundant sensors throughout the system that crosscheck critical signals, software monitoring at 1,000 times per second and a hardwired emergency stop. ZeroG is certified to AAMI ES 60601-1:2005/(R)2012 – Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance, certified to electromagnetic emissions and immunity testing IEC/EN 60601-1-2 4th edition – Medical Electrical Equipment – Part 1-2, and certified to 47 CFR Ch. 1 - FCC Part 15 - Radio Frequency Devices. There has never been a reported adverse event to a therapist or patient using ZeroG.

Q. How long does it take to set a patient up?

The average patient can begin a training session in less than 5 minutes. First, they are secured into a harness, which is attached to the ZeroG spreader bar, the settings are selected from the computer and training can begin.

Q. Which treadmill can be integrated into the ZeroG controls?

A Sprintex medical treadmill can be integrated into the ZeroG software. This allows the ZeroG touchscreen to control and change the speed and inclination angle. Because the ZeroG software communicates with the Sprintex treadmill, training data such as walking distance and speed will be captured in the patient's session data. Additionally, with DualArrest™, if the patient were to fall, ZeroG will automatically stop the treadmill. A standard off-the-shelf treadmill will not have these features when used with ZeroG.

Installation and Facility Facts

Q. What are the ceiling height requirements in order to install ZeroG?

The ceiling height range, from the floor to the drop-down ceiling tiles, is 8'6" – 12'. If the ceiling is outside of this range, Aretech can work with customers to design a custom hanging system for their facility.

Q. How is the track attached to the ceiling?

Most buildings have concrete floors or I-beams as their main structure, which are hidden by the drop down ceiling tiles. The ZeroG track is mounted directly to the main structure of the building (e.g. the concrete or I-beams), making it very strong. The track mounting system was designed by a licensed structural engineering firm and meets all federal building codes.

Q. What kinds of substrate can the track be installed in?

ZeroG can be installed into buildings that have steel reinforced concrete, concrete over metal pans or I-beams. For the first two kinds of substrate, we drive Hilti anchors into the concrete and then suspend the beam from these anchors. For I-beams, we simply clamp our track to the I-beams. A licensed structural engineer has designed all of our installation methods. If the building does not have one of these substrates, Aretech will work with our engineers to develop a custom installation method.

Q. How long does it normally take to install ZeroG?

On average, it takes about 30-40 hours to install a ZeroG system in the customer's facility. We require the area where the system will be installed is closed off for safety reasons. The first 2-3 days of the installation normally involves hanging the track while the last day is when ZeroG is put on the track. We work closely with the clinical staff to try and minimize the inconvenience to the staff during the installation process.

Q. Can installations be done over a weekend?

Partially. Since we need 3-4 full days to install the track and system, normally we can begin the installation Thursday evening and finish Sunday night. But we will need the close down the gym for at least 1 day during the week if we install on a weekend (Friday or Monday). Aretech can work with your staff to come up with a convenient installation schedule.

Q. Does the price of ZeroG include installation?

Yes. We do the track planning and design at Aretech and a standard installation by our certified installers is included in the price of ZeroG.

Q. What are the options for track length and shape?

The included track length is 100 feet (additional length optional) and may include straight sections and curves. We custom design each track for each facility depending on their space in an attempt to give the most functional track with the most length.

Q. What shape track do you recommend?

We recommend tracks that are designed as long and straight as the room allows since this is the most functional. Most activities are done on the straight sections such as walking, sit-to-stand, getting off the floor, steps, and pivoting. In addition, because most customers use a ZeroG-Passive trolley on one end of the track, this leaves space for two patients to train simultaneously with enough privacy in-between them. If the room won't accommodate a long, straight track, Aretech will design a few different options that will work best in the space for the most functionality.

Q. Can ZeroG be used on an oval track?

Yes.

Q. Are there other track mounting options available that do not connect to the ceiling?

Yes. We have done numerous on custom installations. These include free-standing systems where the track is supported by floor-mounted gantries as well as wall-mounted booms. If a ceiling mounted track is not possible for your facility, our engineers can help develop a custom support system that can be installed in your facility. However, you will need to hire a local steel fabricator to install the supports.

Q. When does training occur?

After the system is installed and tested in a customer's facility, Aretech will schedule therapist training. Training is a full day by a therapist with years of experience treating patients with ZeroG.

Q. What other requirements are necessary to install ZeroG?

ZeroG requires a 208-230 VAC, 20 amp outlet to run the system as well as one standard 110 VAC outlet for the touchscreen user-interface computer.