



May 14, 2025

Taizhou Reach Technology Co., Ltd

% Luna Hu

Official Correspondent

Shanghai SUNGO Management Consulting Co., Ltd.

Room 1401, Dongfang Building, 1500# Century Ave.

Shanghai,

China

Re: K250533

Trade/Device Name: Magnesium alloy scooter (RS100)

Regulation Number: 21 CFR 890.3800

Regulation Name: Motorized Three-Wheeled Vehicle

Regulatory Class: Class II

Product Code: INI

Dated: February 24, 2025

Received: February 24, 2025

Dear Luna Hu:

We have reviewed your section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (the Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. Although this letter refers to your product as a device, please be aware that some cleared products may instead be combination products. The 510(k) Premarket Notification Database available at <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm> identifies combination product submissions. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Additional information about changes that may require a new premarket notification are provided in the FDA guidance documents entitled "Deciding When to Submit a 510(k) for a Change to an Existing Device"

(<https://www.fda.gov/media/99812/download>) and "Deciding When to Submit a 510(k) for a Software Change to an Existing Device" (<https://www.fda.gov/media/99785/download>).

Your device is also subject to, among other requirements, the Quality System (QS) regulation (21 CFR Part 820), which includes, but is not limited to, 21 CFR 820.30, Design controls; 21 CFR 820.90, Nonconforming product; and 21 CFR 820.100, Corrective and preventive action. Please note that regardless of whether a change requires premarket review, the QS regulation requires device manufacturers to review and approve changes to device design and production (21 CFR 820.30 and 21 CFR 820.70) and document changes and approvals in the device master record (21 CFR 820.181).

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR Part 803) for devices or postmarketing safety reporting (21 CFR Part 4, Subpart B) for combination products (see <https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products>); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820) for devices or current good manufacturing practices (21 CFR Part 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR Parts 1000-1050.

All medical devices, including Class I and unclassified devices and combination product device constituent parts are required to be in compliance with the final Unique Device Identification System rule ("UDI Rule"). The UDI Rule requires, among other things, that a device bear a unique device identifier (UDI) on its label and package (21 CFR 801.20(a)) unless an exception or alternative applies (21 CFR 801.20(b)) and that the dates on the device label be formatted in accordance with 21 CFR 801.18. The UDI Rule (21 CFR 830.300(a) and 830.320(b)) also requires that certain information be submitted to the Global Unique Device Identification Database (GUDID) (21 CFR Part 830 Subpart E). For additional information on these requirements, please see the UDI System webpage at <https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/unique-device-identification-system-udi-system>.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems>.

For comprehensive regulatory information about medical devices and radiation-emitting products, including information about labeling regulations, please see Device Advice (<https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance>) and CDRH Learn (<https://www.fda.gov/training-and-continuing-education/cdrh-learn>). Additionally, you may contact the Division of Industry and Consumer Education (DICE) to ask a question about a specific regulatory topic. See the DICE website (<https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice>) for more information or contact DICE by email (DICE@fda.hhs.gov) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,


Tushar Bansal -S

for Heather Dean, PhD

Assistant Director, Acute Injury Devices Team

DHT5B: Division of Neuromodulation and

Physical Medicine Devices

OHT5: Office of Neurological and

Physical Medicine Devices

Office of Product Evaluation and Quality

Center for Devices and Radiological Health

Indications for Use

Submission Number (if known)

K250533

Device Name

Magnesium alloy scooter (RS100)

Indications for Use (Describe)

It is a motor driven, indoor and outdoor transportation vehicle with the intended use to provide mobility to a disabled or elderly person limited to a seated position

Type of Use (Select one or both, as applicable)

☐

Prescription Use (Part 21 CFR 801 Subpart D)

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Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

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510(k) Summary

510(k) number: K250533

Document Prepared Date: 2025/05/14

1. Applicant

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2. Device

Trade name: Magnesium alloy scooter (RS100)

Classification name: Motorized three-wheeled vehicle

Regulatory Information

Classification: Class II

Product code: INI

Regulation Number: 890.3800

Review Panel: Physical Medicine

3. Predicate Device

Manufacturer: Zhejiang Innuovo Rehabilitation Devices Co., Ltd.

Product Name: Scooter (W3331)

510(K) #: K240008

4. Indication for Use

It is a motor driven, indoor and outdoor transportation vehicle with the intended use to provide mobility to a disabled or elderly person limited to a seated position.

5. Device Description

RS100 is a Mobility Scooter which provides mobility to a disabled or elderly person limited to a seated position.

The Mobility Scooter is classified in the Class B and the maximum loading weight is 125kg.

The scooter is a battery powered three-wheeled vehicle.

It consists Lithium-ion battery with an off-board battery charger, frame, controllers, motor, seat, back support, arm supports, control panel (including speed knob, battery gauge, power key switch, horn button, throttle control lever, charger port) two rear wheels, one front wheel, foot support.

For convenience of transportation and reduction of possible damage, the battery and arm supports can be dismantled and separately packaged.

Users can also easily assemble these parts without use of the tools.

6. Non-clinical Test Conclusion

Non-clinical tests were conducted to verify that the proposed device met all design specifications as was Substantially Equivalent (SE) to the predicate device. The test results demonstrated that the proposed device complies with the following standards:

- ISO 10993-1: 2018 Biological Evaluation of Medical Devices -- Part 1: Evaluation and testing within a risk management process
- ISO 7176-1:2014, Wheelchairs - Part 1: Determination of static stability
- ISO 7176-2:2017, Wheelchairs - Part 2: Determination of dynamic stability of electrically powered wheelchairs
- ISO 7176-3:2012, Wheelchairs - Part 3: Determination of effectiveness of brakes
- ISO 7176-4:2008, Wheelchairs - Part 4: Energy consumption of electric wheelchairs and scooters for determination of theoretical distance range
- ISO 7176-5:2008, Wheelchairs - Part 5: Determination of overall dimensions, mass and manoeuvring space
- ISO 7176-6:2018, Wheelchairs - Part 6: Determination of maximum speed, acceleration and deceleration of electrically powered wheelchairs
- ISO 7176-7:1998, Wheelchairs - Part 7: Measurement of seating and wheel dimensions
- ISO 7176-8:2014, Wheelchairs -Part 8: Requirements and test methods for static, impact and fatigue strengths
- ISO 7176-9:2009, Wheelchairs - Part 9: Climatic tests for electric wheelchairs

- ISO 7176-10:2008, Wheelchairs - Part 10: Determination of obstacle-climbing ability of electrically powered wheelchairs
- ISO 7176-11:2012 Wheelchairs - Part 11: Test dummies
- ISO 7176-13:1989, Wheelchairs - Part 13: Determination of coefficient of friction of test surfaces
- ISO 7176-14:2008, Wheelchairs - Part 14: Power and control systems for electrically powered wheelchairs and scooters - Requirements and test methods
- ISO 7176-15:1996, Wheelchairs - Part 15: Requirements for information disclosure, documentation and labeling
- ISO 7176-25:2013 Wheelchairs - Part 25: Batteries and chargers for powered wheelchairs
- ISO 16840-10: 2021 Wheelchair seating - Part 10: Resistance to ignition of postural support devices - Requirements and test method
- ISO 7176-21:2009 Wheelchairs - Part 21: Requirements and test methods for electromagnetic compatibility of electrically powered wheelchairs and scooters, and battery chargers
- IEC 60601-1-2:2014+A1:2020 Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral Standard: Electromagnetic disturbances - Requirements and tests

7. Clinical Test Conclusion

No animal study and clinical studies are available for our device. Clinical testing was not required to demonstrate the substantial equivalence of the electric wheelchair to its predicate device.

8. Comparison technological characteristics with the predicate device

Table 1 General Comparison

Elements of Comparison	Subject Device	Predicate Device (K240008)	Remark
Manufacturer	Taizhou Reach Technology Co., Ltd	Zhejiang Innuovo Rehabilitation Devices Co.,Ltd.	--
Device name	Magnesium alloy scooter	Scooter	--
Model(s)	RS100	W3331	--
Indication for use	It is a motor driven, indoor and outdoor transportation vehicle with the intended use to provide mobility to a disabled or elderly person limited to a seated position	It is a motor driven, indoor and outdoor transportation vehicle with the intended use to provide mobility to a disabled or elderly person limited to a seated position.	Same
Overall dimension (mm)	1130×550×840	1110 x 560 x 840	Similar
Frame Material	Magnesium alloy	Steel	Different
Front wheel	200mm × 60mm	196 mm × 66mm	Similar

diameter			
Front Wheels Quantity	1	1	Same
Rear wheel diameter	8inch × 2inch	196mm × 66mm	Similar
Rear Wheels Quantity	2	2	Same
Ground clearance	80mm	35mm	Different
Max Loading(on level ground)	125KG	120KG	Similar
Turn Radius	1212.5mm	925mm	Different
Motor output	24 V 150W	LINIX 24 V 180W	Different
Drive System	Front Wheel Drive	Rear Wheel Drive	Different
Brakes	Electromagnetic brake	Electromagnetic brake	Same
Battery	Li-ion battery 25.2V, 20Ah	Lead-acid 12V12Ah*2	Different
Charger	24V, 3A	24V, 2A	Different
Max Speed	7.56km/h	6.83km/h	Different
Max Slope	10。	Dynamic Stability: 6。 Static Stability: 8。	Different
Travel Distance	25.3km	15km	Different
Distance between armrests	42cm	37-50.5 cm	Different
Controller	M3-YG8	British PG 45A	Different
Time to brake	< 1 s	< 1 s	Same
Brake Distance-Normal operation (Horizontal-Forward-Max speed)	≤1.5m	≤1.3m	Different
Total mass	19KG	40KG	Different
Operating surface & environment	Indoor use and restricted outdoor use on pavements or paved footpaths only.	Indoor use and restricted outdoor use on pavements or paved footpaths only.	Same
Remote control	No	No	Same

Difference analysis

The design and technological characteristics of the proposed device scooter is similar to the predicate device. There are minor differences between the devices in frame material, size, load capacity, weight, ground clearance, turn radius, drive system, battery type, charger, controller, motor output, max speed, max slope, travel distance, Distance between Armrests, brake distance and time to brake. All of the parameters with differences have been tested according to ISO7176 series standards and the test records support its safety and effectiveness. There is no deleterious effect on safety and effectiveness due to the minor differences do not influence the intended use of the device. Therefore, the proposed Scooter is substantially equivalent (SE) to The Scooter (K240008).

Table 2 safety comparison

Item	Subject Device	Predicate Device (K240008)	Results
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Biocompatibility	All user directly contacting materials are compliance with ISO10993-1	All user directly contacting materials are compliance with ISO10993-1	Same
EMC	ISO7176-21& IEC 60601-1-2:2014+A1:2020 & IEC TR 60601-4-2:2016	ISO7176-21& IEC 60601-1-2:2014+A1:2020	Same
Performance	ISO7176 series	ISO7176 series	Same
Label and labeling	Conforms to FDA Regulatory	Conforms to FDA Regulatory	Same

Item	Subject Device	Predicate Device (K240008)	Results
ISO7176-1	The Static stability has been determined after the testing according to the ISO 7176-1, and test results meet its design specification.	The Static stability has been determined after the testing according to the ISO 7176-1, and test results meet its design specification.	Same
ISO7176-2	The dynamic stability has been determined after the testing according to the ISO 7176-2, and test results meet its design specification.	The dynamic stability has been determined after the testing according to the ISO 7176-2, and test results meet its design specification.	Same
ISO7176-3	The effectiveness of brakes has been determined after the testing according to the ISO 7176-3, and test results meet its design specification.	The effectiveness of brakes has been determined after the testing according to the ISO 7176-3, and test results meet its design specification.	Same
ISO7176-4	The theoretical distance range has been determined after the testing according to the ISO 7176-4, and test results meet its design specification.	The theoretical distance range has been determined after the testing according to the ISO 7176-4, and test results meet its design specification.	Same
ISO7176-5	The dimensions, mass has been determined after the testing according to the ISO 7176-5.	The dimensions, mass has been determined after the testing according to the ISO 7176-5.	Same
ISO7176-6	The maximum speed, acceleration and deceleration has been determined after the testing according to the ISO 7176-6.	The maximum speed, acceleration and deceleration has been determined after the testing according to the ISO 7176-6.	Same
ISO7176-7	The seating and wheel dimensions has been	The seating and wheel dimensions has been	Same

	determined after the testing according to the ISO 7176-7.	determined after the testing according to the ISO 7176-7.	
ISO7176-8	All test results meet the requirements in Clause 4 of ISO 7176-8.	All test results meet the requirements in Clause 4 of ISO 7176-8.	Same
ISO7176-9	The test results shown that the device under tests could continue to function according to manufacturer's specification after being subjected to each of the tests specified in Clause 8 of ISO 7176-9.	The test results shown that the device under tests could continue to function according to manufacturer's specification after being subjected to each of the tests specified in Clause 8 of ISO 7176-9.	Same
ISO7176-10	The obstacle-climbing ability of device has been determined after the testing according to the ISO 7176-10.	The obstacle-climbing ability of device has been determined after the testing according to the ISO 7176-10.	Same
ISO7176-11	The test dummies used in the testing of ISO 7176 series are meet the requirements of ISO 7176-11.	The test dummies used in the testing of ISO 7176 series are meet the requirements of ISO 7176-11.	Same
ISO7176-13	The coefficient of friction of test surfaces has been determined, which could be used in other 7176 series tests involved.	The coefficient of friction of test surfaces has been determined, which could be used in other 7176 series tests involved.	Same
ISO7176-14	All test results meet the requirements in Clause 7, 8, 9, 10, 11, 12, 13, 14, 15, 17 of ISO 7176-14.	All test results meet the requirements in Clause 7, 8, 9, 10, 11, 12, 13, 14, 15, 17 of ISO 7176-14.	Same
ISO7176-15	The test results shown that information disclosure, documentation and labelling of device meet the requirements of ISO 7176-15.	The test results shown that information disclosure, documentation and labelling of device meet the requirements of ISO 7176-15.	Same
ISO7176-16	The performance of resistance to ignition meet the requirements of ISO 7176-16.	The performance of resistance to ignition meet the requirements of ISO 7176-16.	Same
ISO7176-21	The EMC performance results meet the requirements of ISO 7176-21, IEC 60601-1-2:2014+A1:2020	The EMC performance results meet the requirements of ISO 7176-21, IEC 60601-1-2:2014+A1:2020.	Same

	and IEC TR 60601-4-2:2016.		
ISO7176-25	The performance of batteries and charger of device meet the requirements in Clause 5 and 6 of ISO 7176-25.	The performance of batteries and charger of device meet the requirements in Clause 5 and 6 of ISO 7176-25.	Same

9. Conclusion

The conclusion drawn from the nonclinical tests demonstrates that the subject device in 510(K) submission, the Magnesium alloy scooter, model:RS100 , is as safe, as effective, and performs as well as the legally marketed predicate device cleared under K240008.