



July 18, 2019

Medos International SARL
% Ms. Sheree Geller
Regulatory Affairs Specialist
DePuy Synthes Spine
325 Paramount Drive
Raynham, Massachusetts 02767

Re: K190895

Trade/Device Name: MOUNTAINEER OCT Spinal System, SUMMIT SI OCT Spinal Fixation System, SYMPHONY OCT System, SUMMIT Fixation System

Regulation Number: 21 CFR 888.3075

Regulation Name: Posterior cervical screw system

Regulatory Class: Class II

Product Code: NKG, KWP, HWC, HRS

Dated: June 18, 2019

Received: June 19, 2019

Dear Ms. Geller:

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 (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 located 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.

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 803) for devices or postmarketing safety reporting (21 CFR 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 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 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,

Ronald P. Jean, Ph.D.
Assistant Director
DHT6B: Division of Spinal Devices
OHT6: Office of Orthopedic Devices
Office of Product Evaluation and Quality
Center for Devices and Radiological Health

Enclosure

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

Form Approved: OMB No. 0910-0120
Expiration Date: 06/30/2020
See PRA Statement below.

Indications for Use

K190895

Device Name

MOUNTAINEER OCT Spinal System
SUMMIT SI OCT Spinal Fixation System

Indications for Use *(Describe)*

The SUMMIT SI OCT Spinal Fixation System and MOUNTAINEER OCT Spinal System are intended to provide immobilization and stabilization of spinal segments as an adjunct to fusion for the following acute and chronic instabilities of the craniocervical junction, the cervical spine (C1 to C7) and the thoracic spine (T1-T3):

- Traumatic spinal fractures and/or traumatic dislocations;
- Instability or deformity;
- Failed previous fusions (e.g. pseudarthrosis);
- Tumors involving the cervical/thoracic spine;
- Degenerative disease, including intractable radiculopathy and/or myelopathy, neck and/or arm pain of discogenic origin as confirmed by radiographic studies, and
- Degenerative disease of the facets with instability.

The SUMMIT and MOUNTAINEER Systems are also intended to restore the integrity of the spinal column even in the absence of fusion for a limited time period in patients with advanced stage tumors involving the cervical spine in whom life expectancy is of insufficient duration to permit achievement of fusion.

The SONGER Wire/Cable System to be used with the SUMMIT and MOUNTAINEER Systems allows for wire/cable attachment to the posterior cervical spine.

The SUMMIT and MOUNTAINEER Systems can also be linked to the ISOLA, MONARCH, MOSS MIAMI, VIPER and EXPEDIUM Spine Systems using the dual wedding band and axial connectors, and via dual diameter rods.

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

Prescription Use (Part 21 CFR 801 Subpart D)

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

CONTINUE ON A SEPARATE PAGE IF NEEDED.

This section applies only to requirements of the Paperwork Reduction Act of 1995.

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Form Approved: OMB No. 0910-0120
Expiration Date: 06/30/2020
See PRA Statement below.

Indications for Use

K190895

Device Name

SYMPHONY OCT System

Indications for Use *(Describe)*

The SYMPHONY OCT System is intended to provide immobilization and stabilization of spinal segments as an adjunct to fusion for the following acute and chronic instabilities of the craniocervical junction, the cervical spine (C1 to C7) and the upper thoracic spine (T1-T3):

- Traumatic spinal fractures and/or traumatic dislocations;
- Instability or deformity;
- Failed previous fusions (e.g. pseudarthrosis);
- Tumors involving the cervical/thoracic spine;
- Degenerative disease, including intractable radiculopathy and/or myelopathy, neck and/or arm pain of discogenic origin as confirmed by radiographic studies, and
- Degenerative disease of the facets with instability.

The SYMPHONY OCT System is also intended to restore the integrity of the spinal column even in the absence of fusion for a limited time period in patients with advanced stage tumors involving the cervical spine in whom life expectancy is of insufficient duration to permit achievement of fusion.

The SYMPHONY OCT System is compatible with occipital fusion components (plates, rods and clamps) from the SYNAPSE Occipital-Cervical-Thoracic (OCT) System and the MOUNTAINEER OCT Spinal System. Additionally, the SYMPHONY OCT System is compatible with SYNAPSE OCT System hooks and rods.

The SONGER Wire/Cable System may be used with the SYMPHONY OCT System to allow for wire/cable attachment to the posterior cervical spine.

The SYMPHONY OCT System may be connected to the EXPEDIUM Spine System and VIPER System using connectors and tapered rods. The SYMPHONY OCT System can also be linked to the USS Spinal System and MATRIX Spine System using connectors and tapered rods.

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

Prescription Use (Part 21 CFR 801 Subpart D)

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

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Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: 06/30/2020
See PRA Statement below.

K190895

Device Name

SUMMIT Fixation System

Indications for Use (*Describe*)

The SUMMIT Plate System is intended for use in treating fractures of small bones such as the metacarpals, ulna, radius, humerus, and metatarsals, and in treating fractures of the lateral malleolus, olecranon, and intra-articular distal tibia.

The SUMMIT Rod System is intended for use in treating fractures of the pelvis, acetabulum, clavicle, scapula, and distal humerus.

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

Prescription Use (Part 21 CFR 801 Subpart D)

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

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510(K) SUMMARY

A. Submitter Information

Manufacturer: Medos International SARL
Chemin-Blanc 38
2400 Le Locle, Switzerland

Submitter: DePuy Synthes Spine
325 Paramount Drive
Raynham, MA 02767

Contact Person: Sheree Geller
325 Paramount Drive
Raynham, MA 02767

Telephone: (508) 828-3291

Fax: (508) 828-3797

Email: sgeller1@its.jnj.com

B. Date Prepared March 19, 2019

C. Device Name

Trade/Proprietary Names: MOUNTAINEER OCT Spinal System
SUMMIT SI OCT Spinal Fixation System
SYMPHONY OCT System
SUMMIT Fixation System

Common/Usual Names: Orthosis, Cervical Pedicle Screw Spinal Fixation
Bone Fixation Screws & Plates

Classification Names: NKG – Class II – 21 CFR §888.3075
Posterior Cervical Screw System

KWP – Class II – 21 CFR §888.3050 Appliance,
Fixation, Spinal Interlaminar

HWC – Class II – 21 CFR §888.3040
Screw, Fixation, Bone

HRS – Class II – 21 CFR §888.3030
Plate, Fixation, Bone

D. Predicate Device Names

Primary Predicate: MOUNTAINEER OCT Spinal System (K151885)
Additional Predicates: SUMMIT SI OCT Spinal Fixation System (151885)
SYMPHONY OCT System (K181949)
SUMMIT Fixation System (K963350, K980368, K982483)

E. Submission Purpose

Obtain clearance for magnetic resonance compatibility labeling of the systems listed.

F. Device Descriptions

MOUNTAINEER OCT Spinal System, SUMMIT SI OCT Spinal Fixation System, and SYMPHONY OCT System

The MOUNTAINEER OCT Spinal System, SUMMIT SI OCT Spinal Fixation System, and SYMPHONY OCT System are posterior spinal fixation systems intended to provide immobilization and stabilization of spinal segments as an adjunct to fusion of the craniocervical junction, the cervical spine (C1 to C7) and the upper thoracic spine (T1-T3). The systems are composed of multiple components to allow the surgeon to build an implant system to fit the patient's anatomical and physiological requirements. The systems consist of bone anchors (such as screws) for connection by longitudinal components (such as rods) via an interconnection mechanism (e.g., set screws) with optional transverse connectors (e.g., cross connectors) to link the longitudinal components for additional stability.

SUMMIT Fixation System

The SUMMIT Fixation System is intended for fracture fixation. The device may be removed after healing of the fracture has occurred. The system includes various lengths of 3 mm rods, 3.5 mm, 4.0 mm and 4.5 mm bone screws, plates, washers, connector plates, pin nuts, and outer nuts.

G. Intended Use

MOUNTAINEER OCT Spinal System, SUMMIT SI OCT Spinal Fixation System

The SUMMIT SI OCT Spinal Fixation System and MOUNTAINEER OCT Spinal System are intended to provide immobilization and stabilization of spinal segments as an adjunct to fusion for the following acute and chronic instabilities of the craniocervical junction, the cervical spine (C1 to C7) and the thoracic spine (T1-T3):

- Traumatic spinal fractures and/or traumatic dislocations;
- Instability or deformity;
- Failed previous fusions (e.g. pseudarthrosis);
- Tumors involving the cervical/thoracic spine;

- Degenerative disease, including intractable radiculopathy and/or myelopathy, neck and/or arm pain of discogenic origin as confirmed by radiographic studies, and
- Degenerative disease of the facets with instability.

The SUMMIT and MOUNTAINEER Systems are also intended to restore the integrity of the spinal column even in the absence of fusion for a limited time period in patients with advanced stage tumors involving the cervical spine in whom life expectancy is of insufficient duration to permit achievement of fusion.

The SONGER Wire/Cable System to be used with the SUMMIT and MOUNTAINEER Systems allows for wire/cable attachment to the posterior cervical spine.

The SUMMIT and MOUNTAINEER Systems can also be linked to the ISOLA, MONARCH, MOSS MIAMI, VIPER and EXPEDIUM Spine Systems using the dual wedding band and axial connectors, and via dual diameter rods.

SYMPHONY OCT System

The SYMPHONY OCT System is intended to provide immobilization and stabilization of spinal segments as an adjunct to fusion for the following acute and chronic instabilities of the craniocervical junction, the cervical spine (C1 to C7) and the upper thoracic spine (T1-T3):

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The SYMPHONY OCT System is compatible with occipital fusion components (plates, rods and clamps) from the SYNAPSE Occipital-Cervical-Thoracic (OCT) System and the MOUNTAINEER OCT Spinal System. Additionally, the SYMPHONY OCT System is compatible with SYNAPSE OCT System hooks and rods.

The SONGER Wire/Cable System may be used with the SYMPHONY OCT System to allow for wire/cable attachment to the posterior cervical spine.

The SYMPHONY OCT System may be connected to the EXPEDIUM Spine System and VIPER System using connectors and tapered rods. The SYMPHONY OCT System can also be linked to the USS Spinal System and MATRIX Spine System using connectors and tapered rods.

SUMMIT Fixation System

The SUMMIT Plate System is intended for use in treating fractures of small bones such as the metacarpals, ulna, radius, humerus, and metatarsals, and in treating fractures of the lateral malleolus, olecranon, and intra-articular distal tibia.

The SUMMIT Rod System is intended for use in treating fractures of the pelvis, acetabulum, clavicle, scapula, and distal humerus.

H. Summary of Similarities and Differences in Technological Characteristics, Performance, and Intended Use

The subject devices maintain the design characteristics of the predicate devices. Intended use remains consistent with the predicate devices. The subject devices are provided with additional labeling language regarding magnetic resonance (MR) compatibility.

I. Materials

The subject device materials remain identical to the predicate device materials, which consist of Titanium alloy, commercially pure Titanium, Cobalt-Chromium-Molybdenum alloy, and Nitinol.

J. Performance Data

Non-clinical testing was conducted in alignment with the following standards:

- ASTM F2213 *Standard Test Method for Measurement of Magnetically Induced Torque on Medical Devices in the Magnetic Resonance Environment*
- ASTM F2052 *Standard Test Method for Measurement of Magnetically Induced Displacement Force on Medical Devices in the Magnetic Resonance Environment*
- ASTM F2119 *Standard Test Method for Evaluation of MR Image Artifacts from Passive Implants*
- ASTM F2182 *Standard Test Method for Measurement of Radio Frequency Induced Heating On or Near Passive Implants During Magnetic Resonance Imaging*

Results demonstrated compatibility conditions of the subject devices in the MR environment.

K. Conclusion

Evaluation of subject device intended use and technological characteristics demonstrates substantial equivalence with the predicate devices. Performance data supports the addition of magnetic resonance compatibility information to subject device labeling.