**510(k) Summary**
**for the**
**RangeMesa/Denali Spinal System: Mesa Hooks**

JUL 1 0 2014

This 510(k) summary for the Range/Mesa/Denali Spinal System is provided as required per 21 CFR 807.92

**1. Submitter :**
K2M, Inc.
751 Miller Drive SE,
Leesburg, VA 20175

**Contact Person** :
Nancy Giezen
K2M, Inc.
Telephone: 703-777-3155

Date Prepared: 07/09/2014

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|---|---|
| **2. Tradename:** | Range/Mesa/Denali Spinal System |
| **Common Name:** | Spinal Fixation System |
| **Regulatory Class:** | Class II, Class III (NKB) |

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|---|---|---|
| Pedicle Screw Spinal System | (21 CFR 888.3070) | (NKB, OSH, MNH, MNI) |
| Spinal Intervertebral body fixation Orthosis | (21 CFR 888.3060) | (KWQ) |
| Spinal Interlaminal fixation Orthosis | (21 CFR 888.3050) | (KWP) |

**3. Predicate or legally marketed devices which are substantially equivalent :**

- K2M Range/Mesa/Denali Spinal System (K052398, K042635 K070229, K121630, K140529)
- Medtronic CD Horizon (K091445)

**4. Description of the device:**

The Range Spinal System is a top-loading, multiple component, posterior (thoracic-lumbar) spinal fixation system which consists of pedicle screws, rods, hooks and rod connectors. The purpose of this submission is to add Mesa Hooks to the system.

**Materials**: The proposed devices are manufactured from Titanium Alloy per ASTM F136 and ASTM F1472.

**Function:** The system functions as an adjunct to fusion to provide immobilization and stabilization of the posterior thoracic and lumbar spine.

**Purpose of Submission:** To add Mesa Hooks.

**5. Intended Use:**

RANGE /DENALI/MESA and SMALL STATURE and ARI are cleared for the following indications:

Non-cervical fixation as an adjunct to fusion for the following indications: degenerative disc disease (defined as back pain of discogenic origin with degeneration of the disc confirmed by history and radiographic studies); spondylolisthesis; trauma (i.e., fracture or dislocation);

spinal stenosis; curvatures (i.e. scoliosis, kyphosis and/or lordosis); tumor; pseudarthrosis; and/or failed previous fusion.

Except for hooks, when used as an anterolateral thoracic/lumbar system the Range Spinal System may also be used for the same indications as an adjunct to fusion.

Except for the ARI staples, the Range Spinal System is indicated as an adjunct to fusion to treat adolescent idiopathic scoliosis when used for posterior noncervical fixation in pediatric patients. The Range Spinal System for pediatric use is intended to be used with autograft and/or allograft. Pediatric pedicle screw fixation is limited to a posterior approach.

**6. Comparison of the technological characteristics of the device to predicate and legally marketed devices :**

The design features and sizing of the components were compared to predicate devices and the Range Spinal System was found to be substantially the same as these systems.

**7. Comparison of the performance data of the device to predicate and legally marketed devices :**

Constructs representing the worst case components were tested in static compression and dynamic compression bending in accordance with ASTM F1717 and were determined to be substantially equivalent to predicate devices.

**8. Conclusion:**

There are no significant differences between the proposed implants and other devices currently being marketed which would adversely affect the use of the product. It is substantially equivalent to these other devices in design, function, material and intended use.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
10903 New Hampshire Avenue
Document Control Center – WO66-G609
Silver Spring, MD 20993-0002

July 10, 2014

K2M, Incorporated
Ms. Nancy Giezen
Manager, Regulatory Affairs
751 Miller Drive SE, Suite F1
Leesburg, Virginia 20175

Re: K140765
Trade/Device Name: Range/Mesa/Denali Spinal System
Regulation Number: 21 CFR 888.3070
Regulation Name: Pedicle screw spinal system
Regulatory Class: Class III
Product Code: NKB, OSH, MNI, MNH, KWP, KWQ
Dated: June 9, 2014
Received: June 10, 2014

Dear Ms. Giezen:

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. 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); good manufacturing practice requirements as set

forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm. 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 http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm.

Sincerely yours.

Ronald P. Jean -S for

Mark N. Melkerson
Director
Division of Orthopedic Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

# Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: January 31, 2017
*See PRA Statement below.*

510(k) Number *(if known)*
K140765

Device Name
Range/Mesa/Denali Spinal System

Indications for Use *(Describe)*
RANGE/DENALI/MESA and SMALL STATURE and ARI are cleared for the following indications:

Non-cervical fixation as an adjunct to fusion for the following indications: degenerative disc disease (defined as back pain of discogenic origin with degeneration of the disc confirmed by history and radiographic studies); spondylolisthesis; trauma (i.e., fracture or dislocation); spinal stenosis; curvatures (i.e. scoliosis, kyphosis and/or lordosis); tumor; pseudarthrosis; and/or failed previous fusion.

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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)

**PLEASE DO NOT WRITE BELOW THIS LINE – CONTINUE ON A SEPARATE PAGE IF NEEDED.**

**FOR FDA USE ONLY**

Concurrence of Center for Devices and Radiological Health (CDRH) *(Signature)*

Zane W. Wyatt
Division of Orthopedic Devices

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

***DO NOT SEND YOUR COMPLETED FORM TO THE PRA STAFF EMAIL ADDRESS BELOW.***

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