



March 18, 2021

Orthofix Inc.  
Natalia Volosen  
Regulatory Affairs Principal  
3451 Plano Parkway  
Lewisville, Texas 75056

Re: K203342  
Trade/Device Name: CONSTRUX Mini Ti Spacer System  
Regulation Number: 21 CFR 888.3080  
Regulation Name: Intervertebral Body Fusion Device  
Regulatory Class: Class II  
Product Code: ODP  
Dated: March 8, 2021  
Received: March 9, 2021

Dear Ms. Volosen:

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](mailto:DICE@fda.hhs.gov)) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,

Brent L. Showalter, 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

## Indications for Use

510(k) Number (if known)

K203342

Device Name

CONSTRUX Mini Ti Spacer System

Indications for Use (Describe)

The CONSTRUX Mini Ti Spacer System is indicated for spinal fusion procedures at one or two contiguous levels within the cervical spine (C2-T1) in skeletally mature patients with degenerative disc disease (DDD). DDD is defined as neck pain of discogenic origin with degeneration of the disc confirmed by patient history and radiographic studies.

The CONSTRUX Mini Ti Spacer System is intended for use with autograft and/or allograft comprised of cancellous and/or corticocancellous bone graft and supplemental fixation system; the hyperlordotic implants ( $\geq 10^\circ$ ) are required to be used with an anterior cervical plate.

Patients must have undergone a regimen of at least six weeks of non-operative treatment prior to being treated with the CONSTRUX Mini Ti Spacer System in the cervical spine.

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.

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## 510(k) Summary

**Device Trade Name:** CONSTRUX Mini Ti Spacer System

**Manufacturer:** Orthofix Inc.  
3451 Plano Parkway  
Lewisville, TX 75056, USA  
Phone: (214) 937-2145  
Fax: (214) 937-3322

**Contact Person:** Ms. Natalia Volosen  
Regulatory Affairs Principal  
nataliavolosen@orthofix.com

**Date Prepared:** January 20, 2021

**Registration Number:** 2183449

**Product Code:** ODP

**Classifications:** Class II – 21 CFR §888.3080, Intervertebral body fusion device

**Primary Predicate:** K202666 – CONSTRUX™ Mini PTC Spacer System, SE 10/14/2020

**Additional Predicate:** K193359 – SureMAX™ Family of Cervical Spacers, SE 1/3/2020

**Reason for the 510(k) Submission:** Addition of 3D printed interbody devices

### Device Description:

The CONSTRUX Mini Ti Spacer System is comprised of a variety of 3D printed implants that have porous titanium end plates and a functional gradient porous structure. CONSTRUX Mini Ti spacers are implanted in the cervical intervertebral disc space and are intended to facilitate vertebral fusion by stabilizing adjacent vertebrae, maintaining disc height and preventing the collapse of one vertebra onto another.

The CONSTRUX Mini Ti Spacer System is not intended to be used as a stand-alone device and must be used with supplemental fixation. The implants are used singly and are implanted using an anterior approach. The CONSTRUX Mini Ti implants are provided sterile.

### Indications for Use and Intended Use:

The CONSTRUX Mini Ti Spacer System is indicated for spinal fusion procedures at one or two contiguous levels within the cervical spine (C2-T1) in skeletally mature patients with degenerative disc disease (DDD). DDD is defined as neck pain of discogenic origin with degeneration of the disc confirmed by patient history and radiographic studies.

The CONSTRUX Mini Ti Spacer System is intended for use with autograft and/or allograft comprised of cancellous and/or corticocancellous bone graft and supplemental

fixation system; the hyperlordotic implants ( $\geq 10^\circ$ ) are required to be used with an anterior cervical plate.

Patients must have undergone a regimen of at least six weeks of non-operative treatment prior to being treated with the CONSTRUX Mini Ti Spacer System in the cervical spine.

**Performance Testing Summary:**

CONSTRUX Mini Ti spacer was evaluated via mechanical testing per ASTM F2077 (including static and dynamic axial compression, static and dynamic compression shear and static and dynamic torsion), ASTM F2267 (subsidence) and characterization of particles per ASTM F1877. The results demonstrated the performance of CONSTRUX Mini Ti spacer is substantially equivalent to the predicate devices.

**Comparison of Technology:**

CONSTRUX Mini Ti Spacer System have the same intended use, indications for use, technological characteristics, materials, the same principles of operation and same design as the predicate device CONSTRUX Mini PTC Spacer System (K202666) and SureMAX™ Family of Cervical Spacers (K193359).

**Conclusion:**

The subject device is substantially equivalent to the CONSTRUX Mini PTC Spacer System (K202666) primary predicate and SureMAX™ Family of Cervical Spacers (K193359) additional predicate with respect to indications, design, materials, function, and performance.