§ 888.3520 Knee joint femorotibial metal/polymer non-constrained cemented prosthesis.

(a) Identification. A knee joint femorotibial metal/polymer non-constrained cemented prosthesis is a device intended to be implanted to replace part of a knee joint. The device limits translation in one or more planes. It has no linkage across-the-joint. This generic type of device includes prostheses that have a femoral condylar resurfacing component made of alloys, such as cobalt-chromium-molybdenum, and a tibial component or components made of ultra-high molecular weight polyethylene and are intended for use with bone cement (§ 888.3027).

(b) Classification. Class II.

§ 888.3530 Knee joint femorotibial metal/polymer semi-constrained cemented prosthesis.

(a) Identification. A knee joint femorotibial metal/polymer semi-constrained cemented prosthesis is a device intended to be implanted to replace part of a knee joint. The device limits translation and rotation in one or more planes via the geometry of its articulating surfaces. It has no linkage across-the-joint. This generic type of device includes prostheses that consist of a femoral component made of alloys, such as cobalt-chromium-molybdenum or austenitic steel, and a tibial component made of ultra-high molecular weight polyethylene and is limited to those prostheses intended for use with bone cement (§ 888.3027).

(b) Classification. Class II.

§ 888.3535 Knee joint femorotibial (uni-compartmental) metal/polymer porous-coated uncemented prosthesis.

(a) Identification. A knee joint femorotibial (uni-compartmental) metal/polymer porous-coated uncemented prosthesis is a device intended to be implanted to replace part of a knee joint. The device limits translation and rotation in one or more planes via the geometry of its articulating surface. It has no linkage across-the-joint. This generic type of device is designed to achieve biological fixation to bone without the use of bone cement. This identification includes fixed-bearing knee prostheses where the ultra-high molecular weight polyethylene tibial bearing is rigidly secured to the metal tibial baseplate.

(b) Classification. Class II (special controls). The special control is FDA’s guidance: “Class II Special Controls Guidance Document: Knee Joint Patellofemorotibial and Femorotibial Metal/Polymer Porous-Coated Uncemented Prostheses; Guidance for Industry and FDA.” See §888.1 for the availability of this guidance.

[68 FR 14137, Mar. 24, 2003]

§ 888.3540 Knee joint patellofemoral polymer/metal semi-constrained cemented prosthesis.

(a) Identification. A knee joint patellofemoral polymer/metal semi-constrained cemented prosthesis is a device intended to be implanted to replace part of a knee joint in the treatment of primary patellofemoral arthritis or chondromalacia. The device limits translation and rotation in one or more planes via the geometry of its articulating surfaces. It has no linkage across-the-joint. This generic type of device includes a component made of alloys, such as cobalt-chromium-molybdenum or austenitic steel, for resurfacing the intercondylar groove (femoral sulcus) on the anterior aspect of the distal femur, and a patellar component made of ultra-high molecular weight polyethylene. This generic type of device is limited to those devices intended for use with bone cement (§ 888.3027). The patellar component is designed to be implanted only with its femoral component.

(b) Classification. Class II. The special controls for this device are:

(i) FDA’s:


(iii) “Guidance Document for Testing Orthopedic Implants with Modified Metallic Surfaces Apposing Bone or Bone Cement,”

(iv) “Guidance Document for the Preparation of Premarket Notification
(510(k)) Applications for Orthopedic Devices,” and
Locked’ Modular Implant Components,” and
(2) International Organization for Standardization’s (ISO):
Wrought Titanium 6-Aluminum 4-Vanadium Alloy,”
Cobalt-Chromium-Molybdenum Casting Alloy,”
Wrought Cobalt-Chromium-Molybdenum Alloy,”
Polyethylene—Part 2: Moulded Forms,”
(vi) ISO 6018:1987 “Orthopaedic Implants—General Requirements for
Marking, Packaging, and Labeling,”
(vii) ISO 7207–2:1998 “Implants for Surgery—Components for Partial and
Total Knee Joint Prostheses—Part 2: Articulating Surfaces Made of Metal,
Ceramic and Plastic Materials,” and
(viii) ISO 9001:1994 “Quality Systems—Model for Quality Assurance in
Design/Development, Production, Installation, and Servicing,” and
(3) American Society for Testing and Materials:
(i) F 75–92 “Specification for Cast Cobalt–28 Chromium–6 Molybdenum Alloy
for Surgical Implant Material,”
Powder and Fabricated Form for Surgical Implants,”
(iii) F 799–96 “Specification for Cast Cobalt–28 Chromium–6 Molybdenum Alloy
Forgings for Surgical Implants,”
(iv) F 1044–95 “Test Method for Shear Testing of Porous Metal Coatings,”
(v) F 1108–97 “Titanium-6 Aluminum-4 Vanadium Alloy Castings for Surgical
Implants,”
(vi) F 1147–95 “Test Method for Tension Testing of Porous Metal Coatings,”
Alloy for Surgical Implants,”
and
(viii) F 1672–95 “Specification for Resurfacing Patellar Prosthesis.”
§ 888.3550 Knee joint patellofemorotibial polymer/metal/metal
constrained cemented prosthesis.
(a) Identification. A knee joint patellofemorotibial polymer/metal/metal
constrained cemented prosthesis is a device intended to be implanted to
replace a knee joint. The device prevents dislocation in more than one
anatomic plane and has components that are linked together. This generic
type of device includes prostheses that have a femoral component, a tibial
component, a cylindrical bolt and accompanying locking hardware that are
all made of alloys, such as cobalt-chromium-molybdenum, and a
retropatellar resurfacing component made of ultra-high molecular weight
polyethylene. The retropatellar surfacing component may be attached to
the resected patella either with a metallic screw or bone cement. All
stemmed metallic components within this generic type are intended for use
with bone cement (§ 888.3027).
(b) Classification. Class III.
(c) Date PMA or notice of completion of a PDP is required. A PMA or a notice of
completion of a PDP is required to be filed with the Food and Drug Adminis-
tration on or before December 26, 1996 for any knee joint patellofemorotibial
polymer/metal/metal constrained cemented prosthesis that was in commer-
cial distribution before May 28, 1976, or that has, on or before December 26, 1996
been found to be substantially equivalent to a knee joint patellofemorotibial
polymer/metal/metal constrained cemented prosthesis that was in commer-
cial distribution before May 28, 1976. Any other knee joint patellofemorotibial
polymer/metal/metal constrained cemented prosthesis shall have an approved PMA or a de-
clared completed PDP in effect before