



marClamp® Cut IQ

Unbeatable for Efficiency and Economy

marClamp® Cut IQ



“Reuse makes economic sense.
We value safety, reliability, and
cost-effectiveness!”

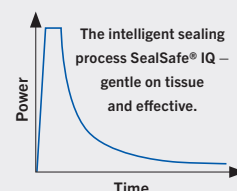
marClamp® Cut IQ

The new combination instrument for open surgical vessel sealing

SealSafe® IQ

The bipolar vessel sealing system, which consists of the maxium® high-frequency generator with its SealSafe® current and the bipolar marClamp® instruments, allows you to seal vessels and tissue bundles effectively and lastingly without any need for previous dissection or detailed exposure of the tissue to be sealed.

The SealSafe® IQ is a process-controlled current mode in which a continuous exchange of information takes place between the HF generator maxium® and the IQ instrument and in which the impedance of the tissue to be sealed is continuously monitored.



Thanks to the precise SealSafe® current specially adapted to this kind of application, only the tissue located between the instrument's jaws is sealed – lateral thermal tissue damage can thus be restricted to an absolute minimum.

The SealSafe® IQ current mode guarantees minimal tissue adhesion and prevents carbonization of the tissue when used correctly.

marClamp® Cut IQ

As well as for tissue preparation and vessel sealing, the marClamp® Cut IQ instruments are also used for subsequent tissue separation – **with no need to change instruments!**

The switch integrated in the instrument automatically triggers the special SealSafe® IQ sealing current once the tissue has been gripped, so no additional footswitch is required.

When sealing has been performed, the current is stopped and an acoustic signal sounds.

✓ **Dissect**

✓ **Seal**

✓ **Cut**

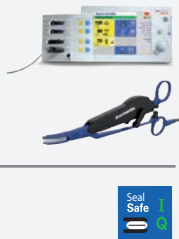
marClamp® Cut IQ Instruments and **maXium®** – the sealing system for fast and safe working

**The reusable sealing system for lasting sealing of veins,
arteries and tissue bundles with subsequent separation –
and absolutely no need to change instruments!**

maXium®

+ **marClamp®** Cut IQ

= **SealSafe®** IQ



... the more intelligent sealing system!



Pressure (p) plus electric current (I) achieve the sealing

Thanks to the effective combination of high pressure (p) and electric current (I), a permanently sealed zone is reliably created on arteries, veins or tissue bundles. It is pivotal here that the pressure is maintained at a constant level throughout the duration of the application. This is ensured via the integrated switch, which only activates the current when the instrument is in the closed position.

During the sealing process, endogenous structural proteins such as collagen and elastin are transformed so that a permanently sealed zone is created as a result.

With this sealing method there is absolutely no need for foreign materials such as sutures or clips. The advantage of this method is the reduction in post-operative pain because no changes in tissue structures occur, as is the case e.g. when tissue is constricted by suture material.

Plug and Play – automatic identification of instruments with intelligent IQ

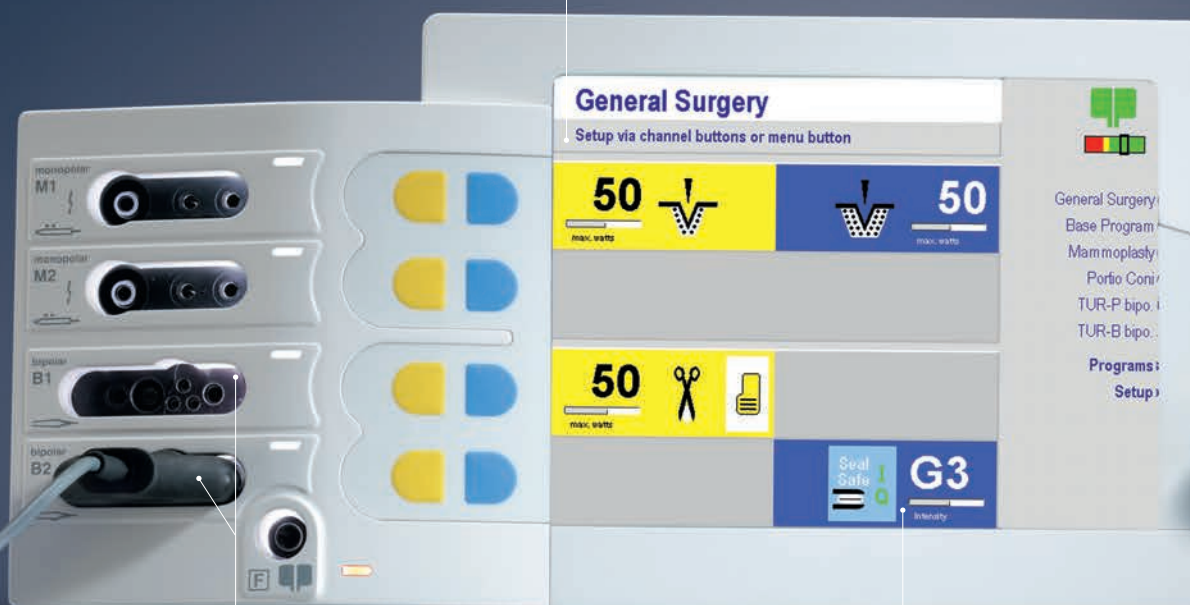
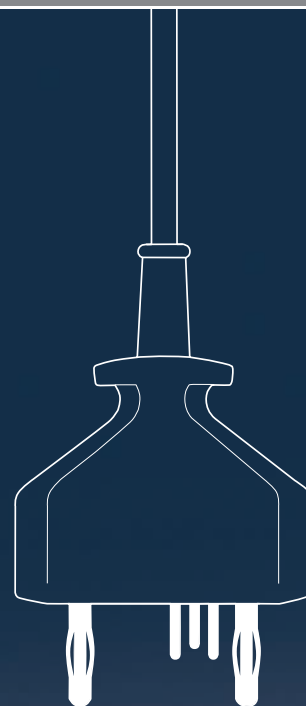
With hardware version 06 the name of the connected instrument is automatically displayed by maxium® as soon as an IQ instrument is plugged in, and the current associated with the instrument is set to a matching default value – it simply could not be more straightforward!

If you do not wish to work with the instrument-specific default values, simply change them as required and save the new values in the usual, program-specific manner. The advantage of this method is that when the IQ instrument is plugged in again, your customized values will appear instead of the default values.

The following items are currently available with IQ functionality together with the SealSafe® IQ current mode:

From software version V3.400 or higher:
marClamp® IQ, marSeal IQ, marSeal Slim IQ and marSeal5 IQ

From software version V3.412 or higher:
marClamp® Cut IQ.



Displaying the name of the connected instrument

Use of the two bipolar connecting sockets

Automatic assignment of the required current type and set-up of the required performance parameters

Multi-use tools instead of disposables:
more ways for everyone to take responsibility

Sequence of steps in the process:



Gripping the tissue



Automatic activation



Sealing the tissue



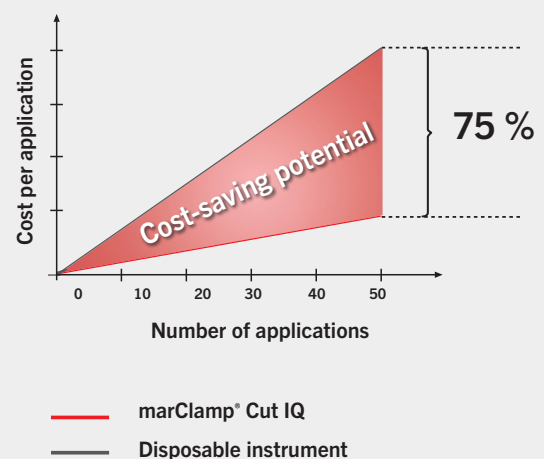
Cutting the tissue

All the benefits at a glance

- Reliable preparation, sealing and separation with just one instrument
- Reproducible and fast sealing process for vessels up to 7 mm with a burst pressure of over 360 mm Hg
- Minimal lateral heat spread of less than 2 mm
- Optimal cutting results due to sterile disposable blade
- Manual activation
- "Plug & Play" function
- Shorter operating times and hospital stays
- Substantial cost saving due to reusability and low proportion accounted for by disposables
- Easy handling and reprocessing
- Autoclavable at 134°C, acc. to ISO 17665-1

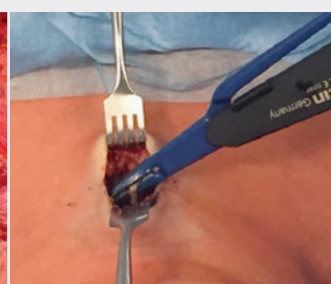
Cost comparison

marClamp® Cut IQ vs. disposable instrument

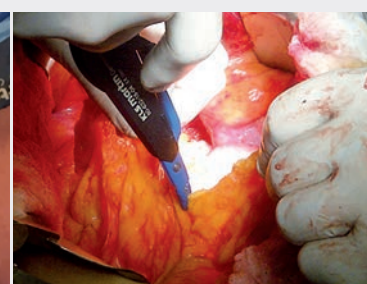




Thyroidectomy



Minimally-invasive video-assisted
thyroidectomy (MIVAT)



Pancreatotomy

Applications

Gynaecology

- Lymphadenectomy
- Adhesiolysis
- Cystectomy

Visceral surgery

- Colectomy
- Gastrectomy
- Splenectomy
- Adrenalectomy
- Nephrectomy

ENT

- Thyroidektomie
- Neckdissektion
- Laryngektomie

Urology

- Cystectomy
- Hydrocele
- Partial cystectomy



Article overview

marClamp® Cut IQ System

Instrument, complete
incl. cleaning tool and 3 cleaning brushes

80-632-18-04 marClamp® Cut IQ, 18 cm

Consumables

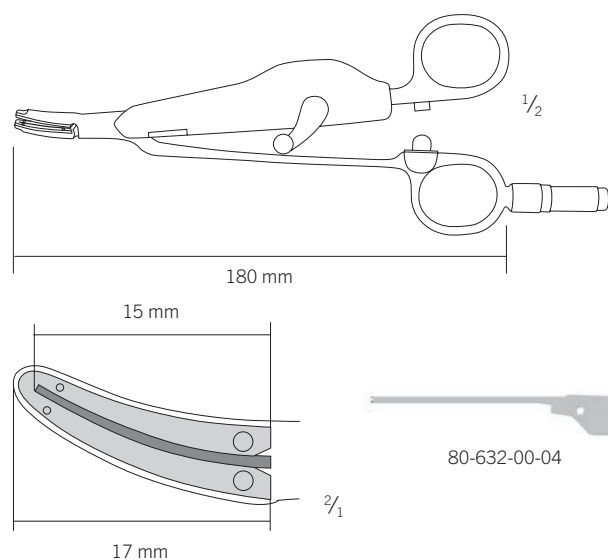
80-632-00-04 Blade for marClamp® Cut IQ, sterile, pack of 10

Cleaning and reprocessing tools

80-630-58-04 Cleaning tool

80-632-01-04 Set of cleaning brushes, 3 pcs.

55-803-75-04 Storing tray marClamp® Cut IQ, with lid, 280 x 170 x 40 mm



KLS Martin Group

KLS Martin Australia Pty Ltd.

Sydney · Australia
Tel. +61 2 9439 5316
australia@klsmartin.com

KLS Martin do Brasil Ltda.

São Paulo · Brazil
Tel. +55 11 3554 2299
brazil@klsmartin.com

KLS Martin Medical (Shanghai) International Trading Co., Ltd

Shanghai · China
Tel. +86 21 5820 6251
info@klsmartin.com

KLS Martin India Pvt Ltd.

Chennai · India
Tel. +91 44 66 442 300
india@klsmartin.com

KLS Martin Italia S.r.l.

Milan · Italy
Tel. +39 039 605 67 31
info@klsmartin.com

KLS Martin Japan K.K.

Tokyo · Japan
Tel. +81 3 3814 1431
info@klsmartin.com

KLS Martin SE Asia Sdn. Bhd.

Penang · Malaysia
Tel. +604 261 7060
malaysia@klsmartin.com

KLS Martin de México, S.A. de C.V.

Mexico City · Mexico
Tel. +52 55 7572 0944
mexico@klsmartin.com

KLS Martin Nederland B.V.

Huizen · Netherlands
Tel. +31 35 523 45 38
info@klsmartin.com

KLS Martin SE & Co. KG

Moscow · Russia
Tel. +7 499 792 76 19
russia@klsmartin.com

KLS Martin Taiwan Ltd.

Taipei · Taiwan
Tel. +886 2 2325 3169
taiwan@klsmartin.com

KLS Martin SE & Co. KG

Dubai · United Arab Emirates
Tel. +971 4 454 16 55
middleeast@klsmartin.com

KLS Martin UK Ltd.

Reading · United Kingdom
Tel. +44 118 467 1500
info.uk@klsmartin.com

KLS Martin LP

Jacksonville · Florida, USA
Tel. +1 904 641 77 46
usa@klsmartin.com

KLS Martin SE Asia Sdn. Bhd.

Hanoi · Vietnam
Tel. +49 7461 706-0
info@klsmartin.com

Do you know how to get all important information
about the KLS Martin Energy Devices?

Please download KLS Martin App Energy Devices!
The App is available for Android and iOS.



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[https://play.google.com/store/apps/
details?id=com.klsmartin.energydevices](https://play.google.com/store/apps/details?id=com.klsmartin.energydevices)

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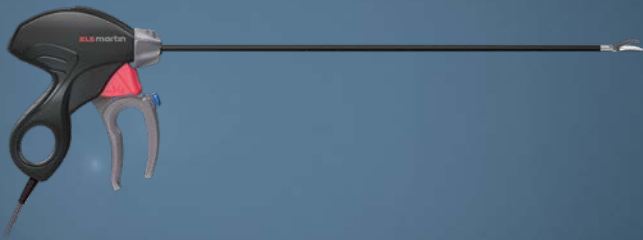
A company of the KLS Martin Group

KLS Martin Platz 1 · 78532 Tuttlingen · Germany
PO Box 60 · 78501 Tuttlingen · Germany
Tel. +49 7461 706-0 · Fax +49 7461 706-193
info@klsmartin.com · www.klsmartin.com



marSeal® 5 plus Maryland

Outstanding dissection and sealing performance
guarantees ultimate efficiency for your patients!



“The new sealing instrument marSeal® 5 plus Maryland is very comfortable to hold. It fulfills all of the ergonomic requirements for a modern sealing instrument.

The fact that the instrument can be reused pays for itself. We value safety, reliability, and cost-effectiveness.”“

*Comment from marSeal® users in the field
of general / visceral surgery and gynecology*



marSeal® 5 plus Maryland Outstanding dissection and sealing performance

The marSeal® 5 plus Maryland rings in the new generation of bipolar sealing instrument from KLS Martin. It has been systematically refined and tailored to meet the needs of users in terms of ergonomics and the ease with which it can be taken apart and cleaned.

The corresponding current – SealSafe® IQ – is supplied by the high-frequency generator maxium®. Together, they form a bipolar sealing system that converts endogenous structural proteins like collagen and elastin in such a way that veins, arteries and tissue bundles are permanently and reliably sealed.

By optimizing the sealing process, sealing time is up to 25% faster. The marSeal® 5 plus Maryland features an integrated blade that is used to cutthrough the tissue in the center of the sealing area immediately after sealing. All this without changing the instrument. And in a single step. This saves valuable surgery time and therefore money.

- ✓ Reliable seal
- ✓ Efficient
- ✓ Reusable

marSeal® 5 plus Maryland

Multifunctionality meets reusability and cost-efficiency.
Patients experience more efficient procedures!



Application examples

General Surgery

- Sigmoidectomy
- Colectomy
- Hemicolectomy
- Adhesiolysis
- Rectum



Gynaecology

- Hysterectomy (LASH, TLH, LAVH)
- Wertheim
- Salpingectomy
- Oophorectomy
- Lymphadenectomy



- ✓ Reliable seal
- ✓ Efficient
- ✓ Reusable



45 cm for bariatric surgery

37 cm for laparoscopic surgery

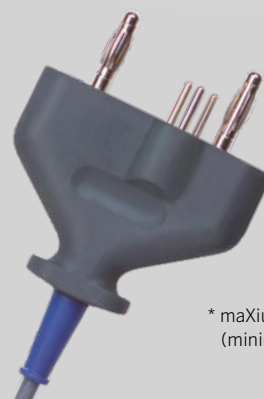
23 cm for open surgery



Advantages

- Vessel sealing with subsequent tissue dissection without instrument change
- Curved jaw according to the anatomical conditions (e.g . curvature of uterus, stomach, colon, etc.)
- Non-traumatic grasping device for blunt dissection
- Excellent visibility to the surgical field, simple exposure of vessels

IQ connector (Plug & Play) for automatic instrument identification at the maXium® generator *.



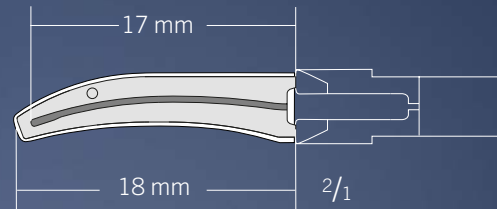
* maXium® software requirement (minimum 3.423 or higher)



- Curved jaw, Maryland shaped
- Enhanced tissue preparation capabilities
- Outstanding and reliable sealing performance
- Finest dissection and minimal lateral spread

Special jaw geometry
for preparation and sealing

- Sealing length: 18 mm
- Cutting length: 17 mm



- Multifunctional instrument
- Highest precision; excellent preparation and dissection capabilities (e.g. spreading for cold preparation due to specially designed jaw pattern)
- Superior procedural efficiency
- Continuous impedance controlled sealing process
- Sealing of vessels up to Ø 7 mm

Go Green

For our environment. For our future.
For a world worth living in.

marSeal® – sealing and cut without changing the instrument and with a minimum of disposables!

It was a question of conviction, to develop these reusable instruments for the bipolar sealing of vessels. KLS Martin has succeeded in offering an alternative to the use of one-way instruments with the marSeal® instruments.

By using marSeal®, far less special waste is created, which needs to be disposed of at high cost and harms the environment. The marSeal® instruments require a minimum amount of one-way materials. Only blades or blade holders are disposable products.

In comparison: 50 blade holders for the marSeal® create 0.5 kg of waste. 50 one-way products create nearly 15 kg of waste. Moreover the marSeal® instruments also contribute significantly to save costs!

In addition to the economic benefits, the instrument also has many medical benefits. The combination of instrument and special sealing current allows for a shorter operating time, less blood loss and thus less physical strain for the patient.

Item numbers of marSeal® 5 plus Maryland at a glance

Article number	Designation
Complete instrument	
80-633-01-04	marSeal® 5 plus Maryland, complete, consisting of handle, tubular shaft Ø 5 mm, shaft length 450 mm, including cleaning tool and flushing adapter, without blade holder*
80-633-02-04	marSeal® 5 plus Maryland, complete, consisting of handle, tubular shaft Ø 5 mm, shaft length 370 mm, including cleaning tool and flushing adapter, without blade holder*
80-633-03-04	marSeal® 5 plus Maryland, complete, consisting of handle, tubular shaft Ø 5 mm, shaft length 230 mm, including cleaning tool and flushing adapter, without blade holder*
Individual components	
80-633-04-04	Handle marSeal® 5 plus
80-633-06-04	Tubular shaft marSeal® 5 plus Maryland, Ø 5 mm, shaft length 450 mm, consisting of outer and inner shaft, including cleaning tool, without blade holder*
80-633-07-04	Tubular shaft marSeal® 5 plus Maryland, Ø 5 mm, shaft length 370 mm, consisting of outer and inner shaft, including cleaning tool, without blade holder*
80-633-08-04	Tubular shaft marSeal® 5 plus Maryland, Ø 5 mm, shaft length 230 mm, consisting of outer and inner shaft, including cleaning tool, without blade holder*
Consumables	
80-633-10-04	Blade holder for marSeal® 5 plus, 230 mm, sterile, sales unit = 10 pieces
80-633-14-04	Blade holder for marSeal® 5 plus, 230 mm, non-sterile, sales unit = 10 pieces
80-633-09-04	Blade holder for marSeal® 5 plus, 370 mm, sterile, sales unit = 10 pieces
80-633-11-04	Blade holder for marSeal® 5 plus, 370 mm, non-sterile, sales unit = 10 pieces
80-633-15-04	Blade holder for marSeal® 5 plus, 450 mm, sterile, sales unit = 10 pieces
80-633-16-04	Blade holder for marSeal® 5 plus, 450 mm, non-sterile, sales unit = 10 pieces
Cleaning and reprocessing tools	
80-633-12-04	Cleaning tool for marSeal® 5 plus
80-633-13-04	Rinsing adapter for marSeal® 5 plus

* Blades have to be ordered separately.

KLS Martin Group

KLS Martin Australia Pty Ltd.

Sydney · Australia
Tel. +61 2 9439 5316
australia@klsmartin.com

KLS Martin do Brasil Ltda.

São Paulo · Brazil
Tel. +55 11 3554 2299
brazil@klsmartin.com

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Shanghai · China
Tel. +86 21 5820 6251
info@klsmartin.com

KLS Martin India Pvt Ltd.

Chennai · India
Tel. +91 44 66 442 300
india@klsmartin.com

KLS Martin Italia S.r.l.

Milan · Italy
Tel. +39 039 605 67 31
info@klsmartin.com

KLS Martin Japan K.K.

Tokyo · Japan
Tel. +81 3 3814 1431
info@klsmartin.com

KLS Martin SE Asia Sdn. Bhd.

Penang · Malaysia
Tel. +604 261 7060
malaysia@klsmartin.com

KLS Martin de México, S.A. de C.V.

Mexico City · Mexico
Tel. +52 55 7572 0944
mexico@klsmartin.com

KLS Martin Nederland B.V.

Huizen · Netherlands
Tel. +31 35 523 45 38
infonl@klsmartin.com

KLS Martin SE & Co. KG

Moscow · Russia
Tel. +7 499 792 76 19
russia@klsmartin.com

KLS Martin Taiwan Ltd.

Taipei · Taiwan
Tel. +886 2 2325 3169
taiwan@klsmartin.com

KLS Martin SE & Co. KG

Dubai · United Arab Emirates
Tel. +971 4 454 16 55
middleeast@klsmartin.com

KLS Martin UK Ltd.

Reading · United Kingdom
Tel. +44 118 467 1500
info.uk@klsmartin.com

KLS Martin LP

Jacksonville · Florida, USA
Tel. +1 904 641 77 46
usa@klsmartin.com

KLS Martin SE Asia Sdn. Bhd.

Hanoi · Vietnam
Tel. +49 7461 706-0
info@klsmartin.com

KLS Martin SE & Co. KG

A company of the KLS Martin Group

KLS Martin Platz 1 · 78532 Tuttlingen · Germany
PO Box 60 · 78501 Tuttlingen · Germany
Tel. +49 7461 706-0 · Fax +49 7461 706-193
info@klsmartin.com · www.klsmartin.com



CERTIFICATE



This is to certify that the company

KLS martin
GROUP

KLS Martin SE & Co. KG

KLS Martin Platz 1
78532 Tuttlingen
Germany

with the organizational units/sites as listed in the annex
has implemented and maintains a **Quality Management System**.

Scope:

Design and Development, manufacturing and distribution of surgical instruments and units, non-active implants, implantable and non-implantable custom-made devices, patient-matched medical devices, operation theatre light supply units, sterile goods supply systems and accessories, surgical RF and laser units and smoke evacuation with sterile and non sterile applicators and accessories, as well as service and maintenance of surgical RF and laser units, smoke evacuation, operation theatre light supply units and ceiling-mounted supply systems.

Through an audit, documented in a report, performed by DQS Medizinprodukte GmbH, it was verified that the management system fulfills the requirements of the following standard:

DIN EN ISO 13485 : 2016 + AC : 2017-07
EN ISO 13485 : 2016 + AC : 2018
ISO 13485 : 2016

Certificate registration no.	210299 MP2016
Certificate unique ID	1000143603
Effective date	2023-11-01
Expiry date	2025-08-28
Frankfurt am Main	2023-11-01



DQS Medizinprodukte GmbH

Sigrid Uhlemann
Managing Director

Szymon Kurdyn
Product Manager

DQS IS A MEMBER OF



August-Schanz-Straße 21, 60433 Frankfurt am Main,
Tel. +49 (0) 69 95427-300, info-med@dqs.de
The validity of this certificate can only be verified by the QR-code.



Annex to certificate
Certificate registration No.: 210299 MP2016
Certificate unique ID: 1000143603
Effective date: 2023-11-01

KLS Martin SE & Co. KG

KLS Martin Platz 1
78532 Tuttlingen
Germany

Location

Scope

210299

KLS Martin SE & Co. KG
KLS Martin Platz 1
78532 Tuttlingen
Germany

Design and Development, manufacturing and Distribution of surgical instruments and units, non-active implants, implantable and non-implantable custom-made devices, patient-matched medical devices, operation theatre light supply units, sterile goods supply systems and accessories, surgical RF and laser units with sterile and non sterile applicators and accessories, as well as service and maintenance of surgical RF and laser units, smoke evacuation, operation theatre light supply units and ceiling-mounted supply systems.

247860

KLS Martin SE & Co. KG
Am Flughafen 18
79108 Freiburg
Germany

Design and Development, manufacturing of surgical RF and laser units with sterile and non sterile applicators and accessories, as well as service and maintenance of surgical RF and laser units and smoke evacuation.

071006

KLS Martin SE & Co. KG
Kolbinger Straße 10
78570 Mühlheim
Germany

Design and Development, manufacturing of surgical instruments and units, non-active implants, implantable and non-implantable custom-made devices, patient-matched medical devices, operation theatre light supply units, sterile goods supply systems and accessories.

31618694

KLS Martin SE & Co. KG
Am Gewerbering 7
78570 Mühlheim / Donau
Germany

Design and Development, manufacturing of non-active implants, implantable and non-implantable custom-made devices and patient-matched medical devices.

EU Quality Management System Certificate

Certificate no.
20320GB448240215

Final Assessment Report no.
20320AU01F

Effective date
2024-02-15

Expiry date
2027-05-11

This is to certify that the quality system of

KLS Martin SE & Co. KG

KLS Martin Platz 1, 78532 Tuttlingen, Germany

SRN: DE-MF-000005551

For design, production, and final product inspection/testing of
Medical devices/groups of medical devices listed on the following pages

Has been assessed and found to comply with respect to

**The conformity assessment procedure described in Annex IX,
Chapters I and III of Regulation (EU) 2017/745 on Medical Devices**

Any applicable limitations for certain medical devices are included in the following list or recorded in the final assessment report. This certification is subject to surveillance by DNV MEDCERT.

Place and date
Hamburg, 2024-02-15

For the issuing office
DNV MEDCERT GmbH – Notified Body 0482
Pilatuspool 2, 20355 Hamburg, Germany



Benannt durch/Designated by
Zentralstelle der Länder
für Gesundheitsschutz
bei Arzneimitteln und
Medizinprodukten
www.zlg.de
BS-MDR-096


Lorenz Runge
Director Certification Body

The certificate is only valid when provided entirely with all of its pages. To verify the validity of this certificate, contact Medcert-Info@dnv.com



Certificate no.: 20320GB448240215
Place and date: Hamburg, 2024-02-15

Preceding certificate

Certificate no.	Issue date	Identification of changes
20320GB448220825	2022-08-25	CN 12 (WO-012114), CN 16 (WO-012438)
20320GB448231113	2023-11-13	Class IIb listed per intended purpose
20320GB448240212	2024-02-12	CN 08 (WO-011351)

Sites covered by this certificate

KLS Martin SE & Co. KG, KLS Martin Platz 1, 78532 Tuttlingen, Germany
KLS Martin SE & Co. KG, Am Flughafen 18, 79108 Freiburg im Breisgau, Germany
KLS Martin SE & Co. KG, Kolbinger Straße 10, 78570 Mühlheim an der Donau, Germany
KLS Martin SE & Co. KG, Am Gewerbering 7, 78570 Mühlheim an der Donau, Germany



Products covered by this certificate

Class IIb medical devices, excluding implantable non-WET

Category	EMDN code	Medical devices/groups of medical devices
MDN 1102	P09120503	Osteosynthesis screw-plate systems

Intended purpose

The L1 Rib Plating System is indicated for osteosynthesis in the thoracic anatomy.

Category	EMDN code	Medical devices/groups of medical devices
MDN 1102	P09120503	Osteosynthesis screw-plate systems

Intended purpose

The Osteosynthesis systems include implantable single-use devices that are used for internal fixation after alignment, reconstruction and stabilization of bone tissue.

Category	EMDN code	Medical devices/groups of medical devices
MDN 1102	P09120503	Osteosynthesis screw-plate systems

Intended purpose

The products are non-active implants, which are intended to temporary stabilize bone or bone fragments

Category	EMDN code	Medical devices/groups of medical devices
MDN 1102	P09120599	Bone fixation plates - other

Intended purpose

The maxillary distractors are implantable single-use products designed to distract the maxillary bone.

Category	EMDN code	Medical devices/groups of medical devices
MDN 1102	P09120599	Bone fixation plates - other

Intended purpose

The cranial distractors are implantable single-use products designed to distract the cranial bone.

Category	EMDN code	Medical devices/groups of medical devices
MDN 1102	P09120599	Bone fixation plates - other

Intended purpose

The midface distractors are implantable single-use products designed to distract the midfacial bones.

Category	EMDN code	Medical devices/groups of medical devices
MDN 1102	P09120599	Bone fixation plates - other

Intended purpose

The mandibular transversal distractors are implantable single-use products designed to transversally distract the mandibular bone.

Category	EMDN code	Medical devices/groups of medical devices
MDN 1102	P09120599	Bone fixation plates - other

Intended purpose

The alveolar distractors are implantable single-use products designed to distract the mandibular or maxillary bone.

Category	EMDN code	Medical devices/groups of medical devices
MDN 1102	P09120599	Bone fixation plates - other

Intended purpose

Distractors for hand and foot surgery are implantable single-use products designed to distract bones of the extremities.

Category	EMDN code	Medical devices/groups of medical devices
MDN 1102	P09120599	Bone fixation plates - other

Intended purpose

The mandibular transport distractors are implantable single-use products designed to distract mandibular bones by means of segmental transport.



Certificate no.: 20320GB448240215
Place and date: Hamburg, 2024-02-15

Class III custom-made implantable medical devices

Category	Medical devices/groups of medical devices
MDN 1102	Non-active osteo- and orthopaedic implants
MDN 1104	Non-active soft tissue and other implants

