lynxeo

Wired to electrify industry

NEWSENSE®

cable solutions and services
to perfectly match your needs

Prevention, diagnostics, treatment and surgery require NEWSENSE® customized cable solutions

We are in a new era of high-tech medicine where technology is playing an important role. Medicine is focusing on prevention as well as treatment and diagnostics requiring the use of imaging devices.

Recent breakthroughs in laparoscopy and telerobotics are transforming the operating theater, providing minimally invasive solutions as an alternative to complex open surgical techniques.

Eventually, electronic devices will be able to detect, evaluate, treat and report to the clinical doctor automatically via remote patient monitoring (RPM) and a wireless net-linked system, bringing advanced health care out of the hospital and right into the home.

Meanwhile, increased price pressures and new emerging markets in Asia are pushing medical manufacturers to manage costs more carefully while maintaining quality.

Much of this exciting medical revolution depends on high-quality microcables, multicore cables for dynamic applications, and composite cables which combine several functions in one cable: e.g. plastic optical fiber, coaxial cable, twisted pairs, tubes for air, gases or liquids, etc.

Customized micro and composite cables for your needs: no more, no less.

As an innovative manufacturer of imaging equipment and invasive solutions, you want high-performance medical cables that offer:

- ISO13485 certified and compliance with ISO10993 biocompatibility standards to support FDA qualification
- Resistance to all sterilization techniques: ETO, autoclave gamma rays, etc.
- Protection against multidrug-resistant (MDR) bacteria/viruses
- Cosmetic aspect, comfort and ease of use for doctor, technician and patient
- Electromagnetic compatibility (EMC) in the “busy” clinical environment
- Optimal flexibility for biosensors, monitors, catheters
- Compactness and lightness for portable devices and wearable applications

Imaging

NEWSENSE® cable offer

Cables solutions for imaging devices (Scanner, IRM, RX, Nuclear medicine...)

- Customized composite cables transmitting power, control and data in “All in one” design.
- Wires, coax, twisted pairs with cross section from 50 mm2 (AWG 0) down to 0.032 mm2 (AWG32)
- Optimized mechanical resistance and flexibility for dynamic use.
- UL certifications.

Cable solutions for Endoscopy

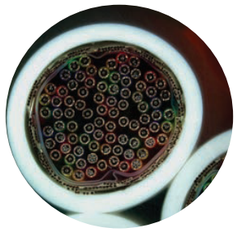
- Hybrid micro-cables including coaxial, twisted pairs, wires and optical fibers.
- Miniaturized design for “chip on the tip” technology with cross section conductors down to AWG48 (Ø0.03mm).
- Conductors in specific alloys provide high mechanical resistance and flexibility for long lifetime.
- Optimized electromagnetic immunity to preserve signal integrity.
- Biocompatible and sterilizable materials by ETO, Autoclave, Gamma rays...

Cable solutions for ultrasound

- Multimicrocoax cables for echography or doppler probes.
- From 2 to 528 microcoax, AWG38 (Ø0.10 mm) to AWG46 (Ø0.04mm), 50 Ohm or 80 Ohm impedance.

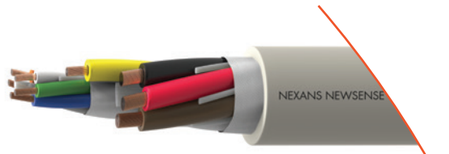
Patented dielectric technology

Aerated fluoropolymer dielectric not only provide enhanced performances with regard to insertion loss, low capacitance and propagation speed but also make easy stripping for termination and facilitate handling by size and weight reduction.



INNOVATION: New Non-sticky silicone jacket

- High flexibility for easy handling and bending strength.
- No stick-slip effect for easy insertion in tubes and perfect hygiene.
- USP Class VI and FDA 177.2600 approved.
- Resistant to autoclave sterilization



Services to reduce your Time to Market:

- Short length prototyping for customer evaluation.
- R&D support at early stage of new developments
- Development of tailor-made process solutions in collaboration with customers for cables handling, cutting, coiling, over-moulding, soldering...
- Wide range of testing capabilities (mechanical , electrical, electromagnetic) to simulate real using conditions in order to support customer homologation process and predict product lifetime.
- Competence Center to define “plug and play” solutions: cable + connector + harness

Minimally Invasive Surgery

NEWSENSE® cable offer for minimally invasive surgery

Fine Gauge Cables

Nexans micro-cables are designed for transcatheter technologies and invasive monitoring in cardiovascular and neurology. Their miniature size, their electrical , electromagnetic and mechanical performances make them perfectly suitable for electrophysiology and all sensors applications.

Catheter cables

- Miniaturized cables with wires down to AWG54 (Ø15 microns) in single, multi-wires, twisted pairs or coaxial constructions.
- Conductors in specific alloys for high mechanical strength and good electrical performances
- Biocompatible, sterilizable and certified materials (ISO10993; USP Class VI)

Lead wire for pacemakers

Wires and coaxial cables AWG 28 to 34, with stainless-steel conductor for mono and bipolar simulation electrodes.

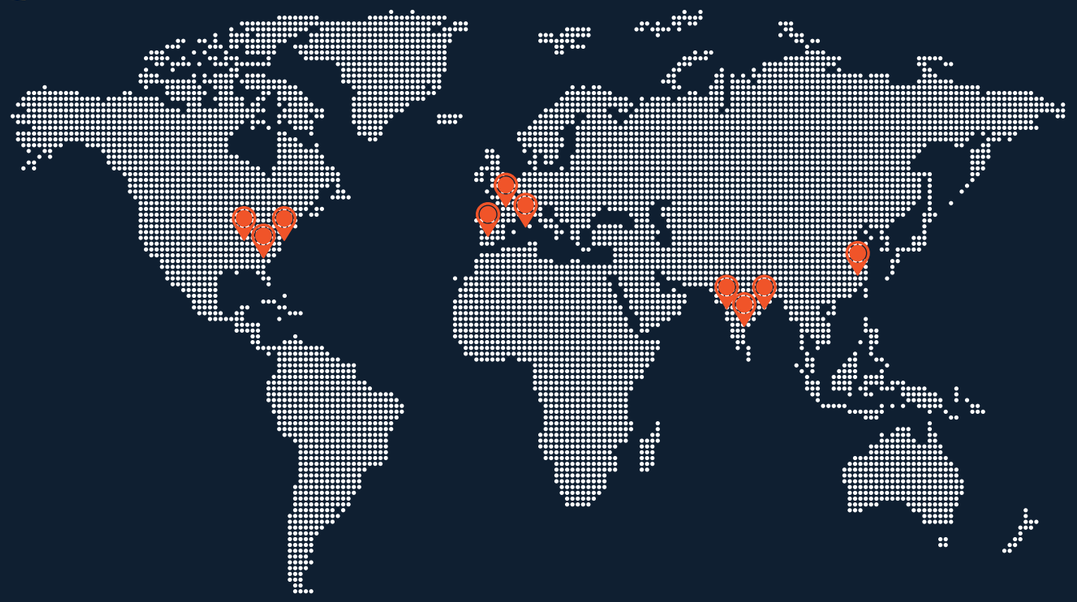
Micro-manufacturing unit

- Cables are produced in healthcare units, in clean room and environment control conditions.
- Engineers are developed technologies and design machines in-house with daily objective to push back the limits of miniaturization.
- Automated in line control systems guarantee a stable and high level of quality.

Benefits of NEWSENSE® for minimally invasive surgery

- State-of-the-art quality processes to ensure product consistency
- Tailor made design according to customers cabling process▪ Easy termination process
- High signals density and multi-functionalities in miniaturized format
- Cosmetically designed to offer patients exceptional comfort
- EM-shielded for safe clinical, home and on-the-job operation

Supplier of 3 main worldwide imaging OEMs



Lynxeo medical industrial footprint

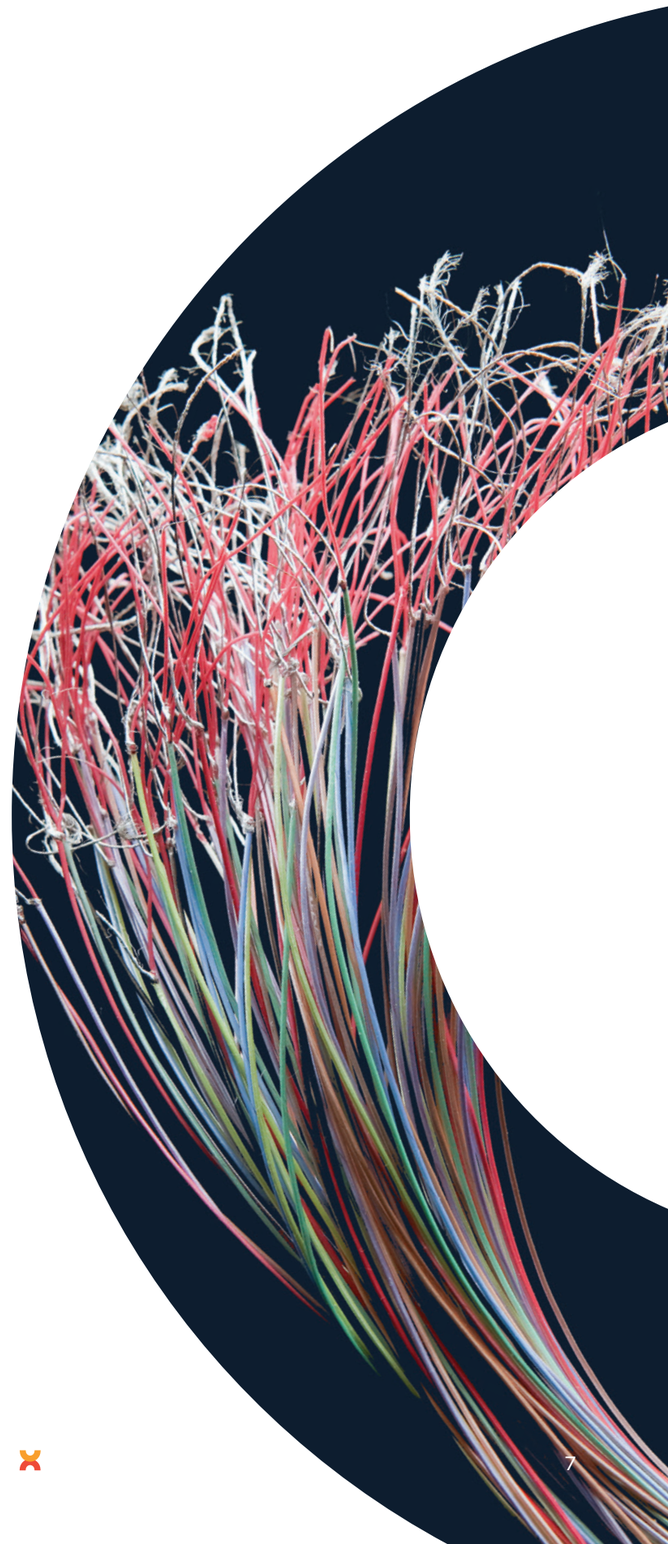
PLANTS	LYNXEO PIOLTELLO PLANT	LYNXEO DRAVEIL PLANT
Offer	**IMAGING AND MONITORING** (Core Section AWG32 to 50 mm2) Products: Hybrid cables, customized design Coax ; Multi-coax ; Single wires ; Multi-conductors Optical fiber	**INVASIVE** (Cores section AWG52 to AWG38) Products: Multi-pairs, Multi-conductors, Coax **ENDOSCOPY** (Cores section AWG46 to AWG 34) Products: Hybrid cables, customised design **ULTRASOUND** (Cores section AWG44 to AWG36) Products: Multicoax
DESIGN CAPABILITIES		
Conductors	Copper, Tinned copper, Silver plated copper, Enamelled copper, Tinsel, Constantan, Alloys	Copper, Tinned copper, Silver plated copper, Enamelled copper, Stainless steel, Constantan, Alloys
Extrusion capabilities	PVC, PE, PA, PP, Foam PE, PUR, TPE, TPC, ETFE, FEP, PFA, PVDF, PET, PEI, LSZH, XLPE Semi-conductive PVC Silicone	PVC, PE, PA, PUR, TPE, Siltem, FEP, MFA, PFA, PTFE, PEI, LSZH Fluoro aerated technology Silicone
Taping capabilities	Polyester, PTFE, Aluminium/Polyester, Copper, Mumetal, Mica, semi-conductive	PTFE, Polyimide, Polyester, Aluminium, Copper, Mumetal, Mica, Semi-conductive
Assembling capabilities	Hybrid cables with FO, tubes Water-blocking material Max numbers: 130 cores	Hybrid cables, Multicoax Max numbers: 528 cores
Shield capabilities	Serve shield and braiding (wires Ø until AWG44) Textile braid: aramid	Serve shield and braiding (wires Ø until AWG54) Textile braid: Aramid, glass, Cotton
Quality certification	ISO 9001; many UL AWM styles approvals	ISO 13485, EN9100, ISO 9001, ISO 14001

Lynxeo in the medical market

2 dedicated plants
Pioltello, Italy Draveil, France

1 competence center
dedicated to medical

Harnesses solutions
with our preferred partners



Lynxeo expertise

- Based on ongoing R&D in dedicated Lynxeo competence centers
- Industrial capacity adapted to OEM production; customized prototypes
- Draws on Lynxeo experience in aeronautics, robotics, LANs, etc.
- Shared expertise, laboratory technical support, extensive service program
- Worldwide presence and country-specific project development

lynxeo

Wired to electrify industry

Industry is everywhere. Making our daily lives easier. Fostering progress. Moving the world. Industry plays a key role in shaping a better future.

We have been serving industry for generations. Today, we are committedto making it more efficient, more reliable and more sustainable.

Our cables are essential to the machines developed by global industry champions. They serve as the spinal cord of mission-critical infrastructures, assets and applications. Our clients rely on our advanced technologies and our industrial excellence to bring their machines to life.

In the century since we were founded, we have risen to a leading positionin our markets.

Now, as a standalone company, we embark on a new journey with even greater agility, more focus and stronger customer intimacy.

For industry leaders, we are ever-evolving partners in an ever-changing world.

Together, we build connections beyond cables.

From energy transition to mobility and automation, our teams are tacklingthe greatest challenges of our times.

Our name is Lynxeo. We have local roots and global reach.

Connected to our customers, committed to excellence and progress, we are wired.

Wired to electrify the industries that move the world.

www.lynxeogroup.com