

LAUNCH

PROFESSIONAL MANUFACTURING PARTNER OF MEDICAL ACCESSORIES

Rev.2016

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LAUNCH MEDICAL PROFILE

Shenzhen Launch Electrical Co. Ltd, (Launch Medical), was founded in 2001, and professionally commits to the research, development, manufacture and sales for all cabling accessories of Medical Diagnosis and Monitoring Equipment.

Our products are extensively used for a wide range of ECG monitors, Electrocardiographs, Fetal ECG monitor, ECG Diagnostic Instruments, Oximeters, Ultrasonic monitors, and other specialist medical equipment.



Launch Medical considers Quality an essential key to business and as such holds internationally accepted 3rd party accreditation for ISO13485, CE, CFDA, and is registered with the FDA for device manufacture & import into USA.

By meeting these minimum requirements, our customers are given an added level of confidence when selecting Launch Medical as a partner.

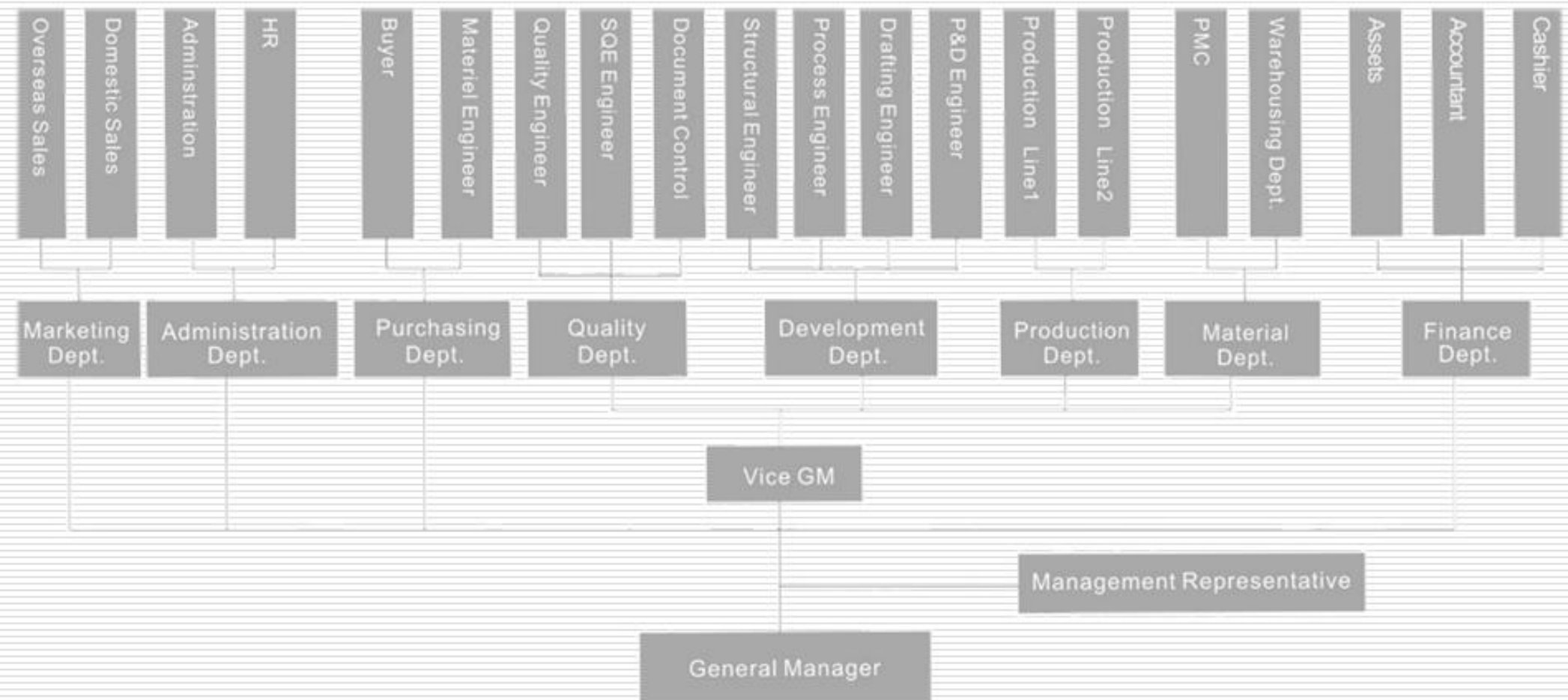
We are structured on a "Customer-oriented business philosophy". With a stable team of employees actively supporting customer's needs, who have an active interest in industry trends, complimented by continuous improvement in all areas allows for innovative management and proactive product development, delivering product quality, reliability, and efficiency savings. This provides a competitive edge on design, manufacturing, quality and cost.

We strictly comply with the regulations for manufacturing medical products, and cater for the personalised requirements of our customers thus providing reliable, competitive, and comprehensive solutions.

We have built up a strong skilled team that is deep with experience, strong on technical solutions, and we pride ourselves on FAST responses. With these skills & expertise, we have been chosen by many famous OEM companies to be their supply partners for all their specialist medical equipment needs.

Successfully competing in this field for the past 15 years, Launch Medical is a highly respected company that delivers on quality, manufacturing ability, efficiency and active professional product management for many famous international OEM companies.

ORGANISATIONAL STRUCTURE



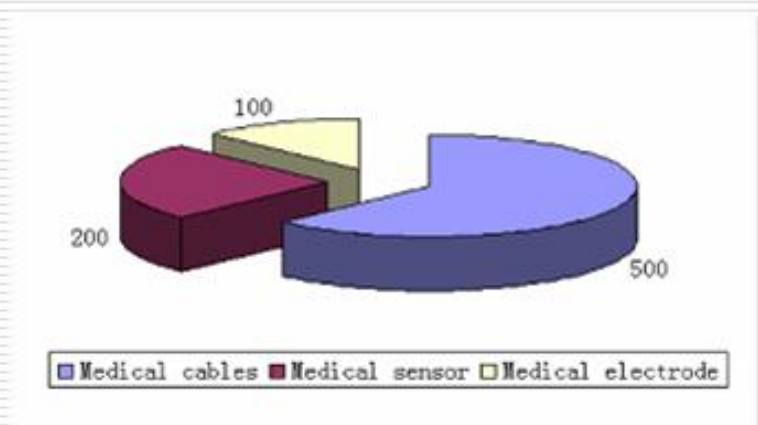
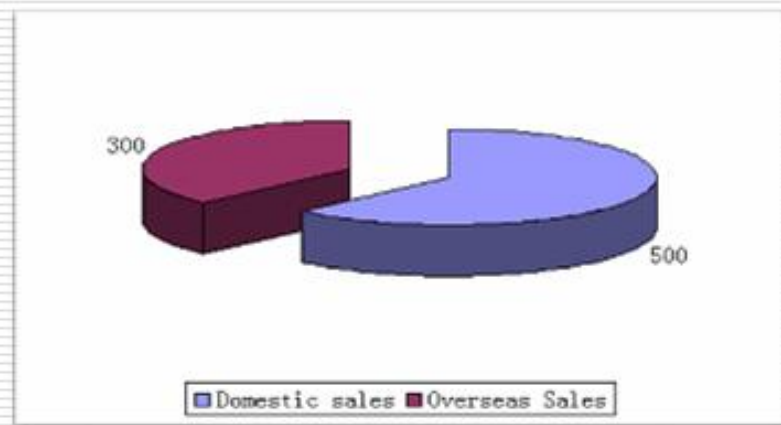
Sales Distribution

2015 Forecasted Sales of Medical accessories USD \$8 million

Actual - Domestic Sales : USD \$5 million USD

Overseas Sales : USD \$3 million USD

- Medical Cables : USD \$5 million USD (ECG, EKG, EEG)
- Medical Sensor : USD \$2 million USD (SpO₂, Temp. Probe)
- Medical Electrode : USD \$1 million USD (Electrode, Blood Pressure)



Available Floor Area

Factory Total Area :	6800 m ² (73,000 feet ²)
Warehouse Area :	1700 m ² (18,000 feet ²)
Manufacturing & Assembly Area :	4500 m ² (48,000 feet ²)
Office Area :	600 m ² (6,500 feet ²)

Production Lines Total – 13

ECG Line : 3	EKG Line : 3
EMG Line : 2	SpO ² Line : 2
Electrode & EMG Line : 1	Temperature Probe Line : 1
Others Accessories Line : 1	

HUMAN RESOURCES & EQUIPMENT OVERVIEW

Employee Numbers

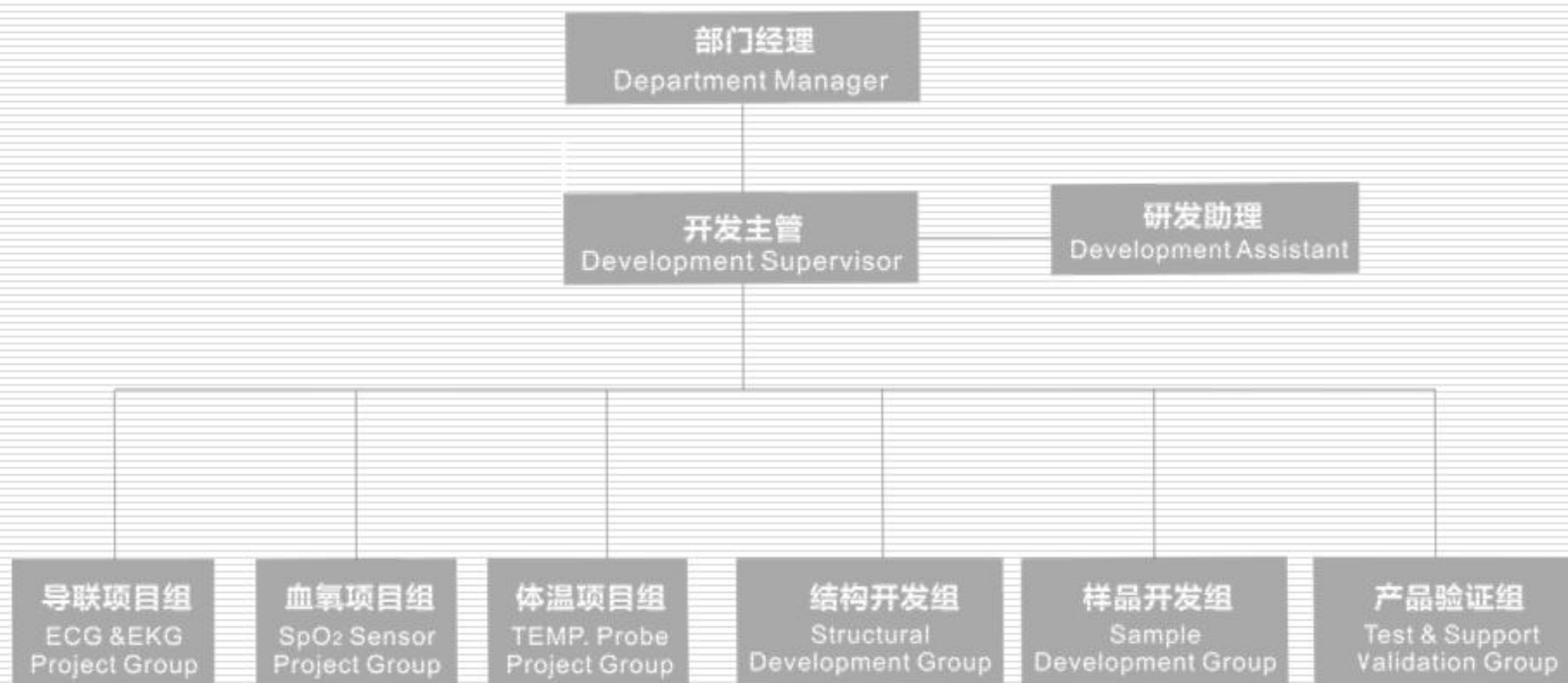
- Shop Floor Employees : 230
- Supporting Management Team : 70
- Total number : 300

Main Production & Testing Equipment

- Vertical injection molding machines : 21
- Terminal machines : 15
- Ultrasonic welding machines : 5
- Microcomputer integrated test machines : 20
- Visual Display & Gaging : 16



Development Organization Structure



Development Organization Structure

Personnel Allocation

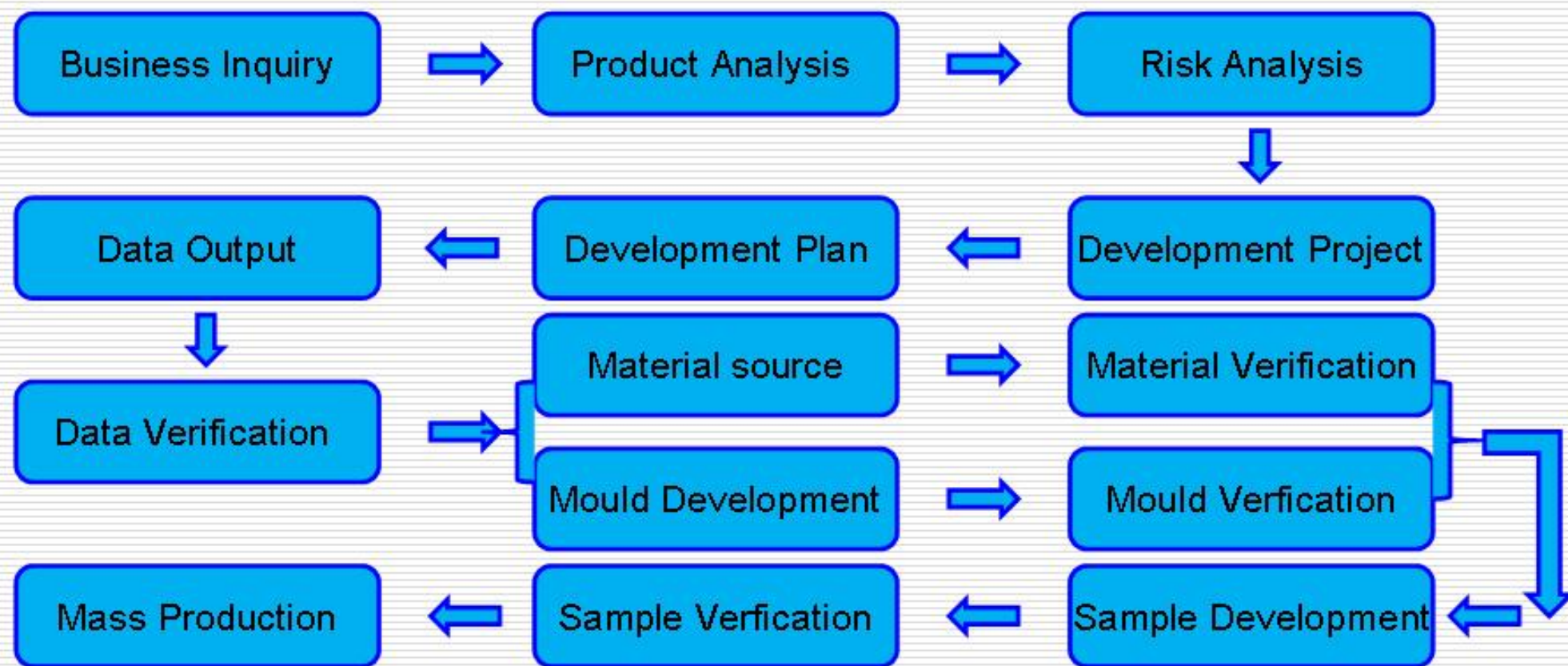
Sample Making Development :	9	Other Medical Development :	1
Nerve Electrode Development :	2	Reliability verification :	1
ECG Development :	2	R&D Assistant :	1
Product Structure Development :	2	R&D Director :	1
Medical Sensor Development :	2		

Product Development Capabilities

- Launch Medical has over 15 years experience with product development and manufacturing experience in medical cabling
- Built long associations with domestic & international OEM customers including Medtronic, Philips, Nihon-Kohden, Edan, Mindray, etc.)
- Passed ISO13485 Medical Device Quality Management System certification.
- Developed medical cables and probes through CE, CFDA accreditation and registration.
- Launch Medical has simulation test equipment to assist development of new products
- High quality and stable supplier chain relationships reduce development times of new products while providing reliable technical support

DEVELOPMENT MANAGEMENT

Product Development Process



Development Software & Hardware

Development Software :

Using CAD, PRO/E, UG, Solidworks & AutoCAD software to make 2D & 3D drawings & models.

By using 2D & 3D software, models can be developed and refined before making physical samples, mold flow analysis, FEA and other tools to ensure reduced development time and “right-first-time”.

Product Test & Support – 1

Extensive range of test equipment and clinical simulation equipment ensures the reliability and security of the new product developments



High voltage defibrillation simulation test

Typically cable must take at a minimum of 50 defibrillation shocks to meet requirement



Noise level test

Electrical noise testing is important to reliable performance. Noise test ensure cables meet required standard



Simulation testing

ECG lead simulation testing is to ensure normal waveform during surgery, and not effect output signals

Product Test & Support – 2



Wire & Strain Relief Fatigue Test

Simulated test for fatigue life to determine service life of the cable. Cable requirements will vary between disposable & reusable usage.



Salt Fog Spray Test

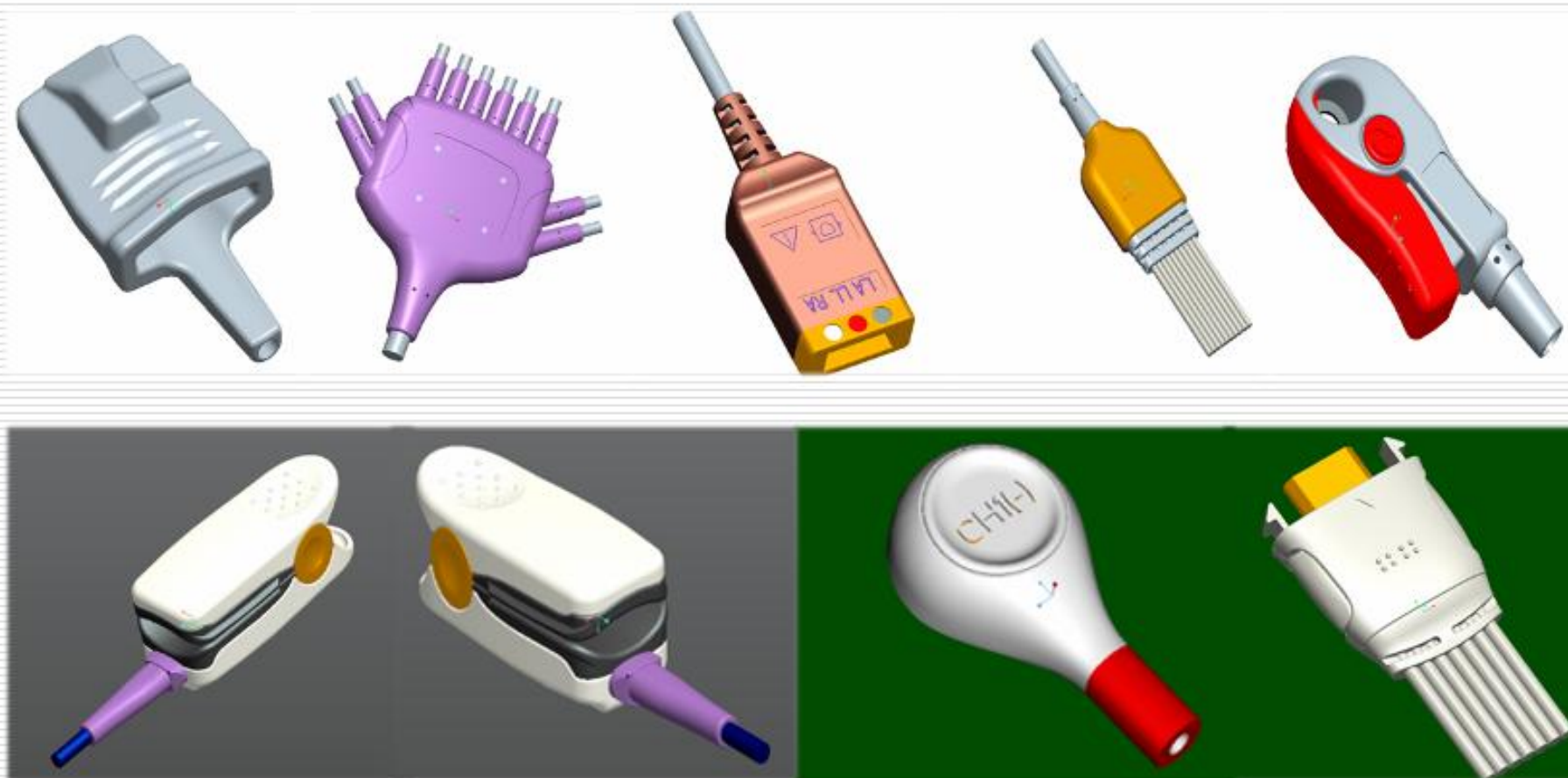
Extreme environmental simulation test for a wide variety of hardware. It is extremely useful for plated products analysis.



Connector Insertion & Removal Force Test

Simulated hardware will determine insertion & removal force, application speeds, and fatigue life.

Product Development Samples



PATENT DEVELOPMENTS

Product Development Patent

Launch Medical has successfully applied for 24 patents –

Utility model patents : 19 product applications

Design patents : 5 product applications



Certificate of Design Patent



Certificate of Utility Model Patent



We work on the principle, "To satisfy the customer in all areas of the partnership"

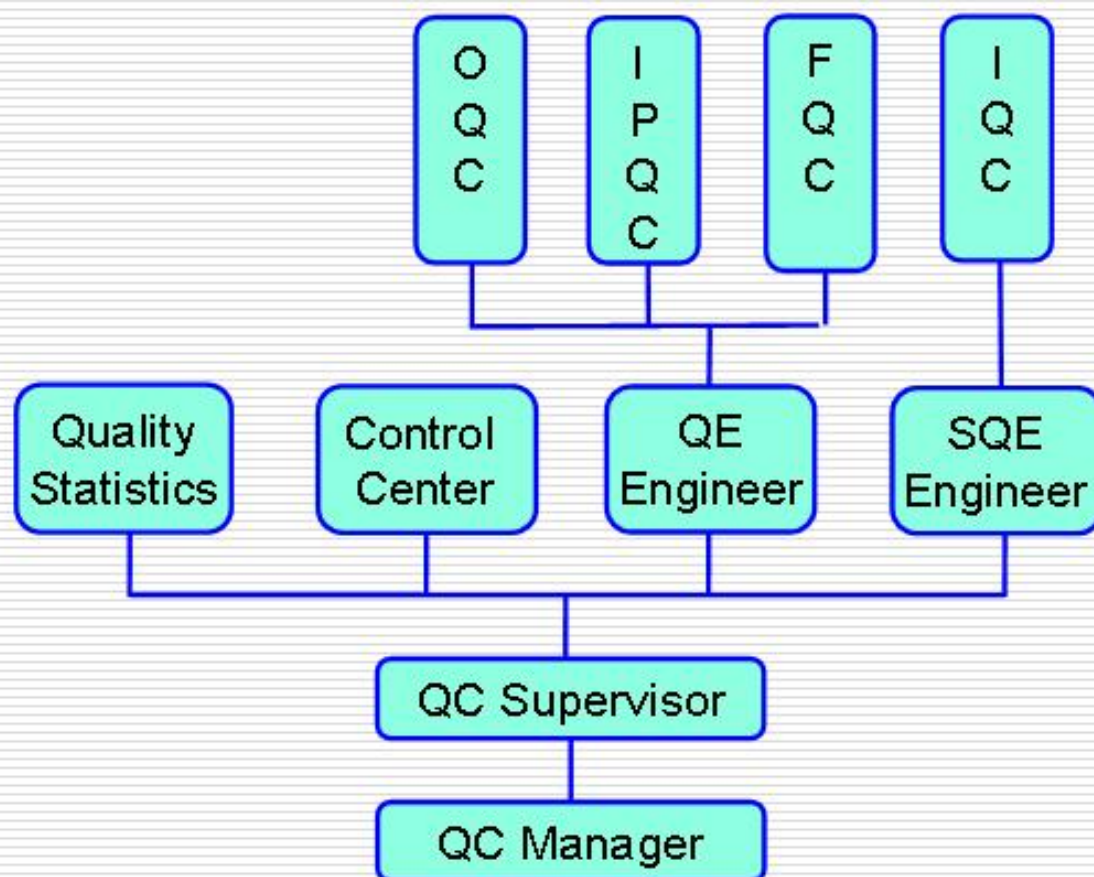
Launch Medical has passed ISO13485, CE & CFDA. Our production team is driven by "prevention first" and utilise TQM, TMP, SPD, QCC, 5S in the production process. These actions steadily decreases the PPM concerns.

PDCA helps with maintaining the quality of our products and ensures continuous improvement, as we actively pursue and achieve world class quality.

Quality Department Organizational Structure and Personnel Allocation

Personnel Allocation

FQC Inspector :	30
IPQC Inspector :	4
OQC Inspector :	3
IQC Inspector :	2
SQE Engineer :	1
QE Engineer :	1
Quality Manager :	1
Quality Director :	1



Quality Management System

- Since 2007, Launch Medical has built a sound Quality Management System, and is accredited with ISO13485 issued by TUV SUD.
- This quality initiative is continually reinforced by internal & OEM customer auditing the Quality Management System.
- All staff also have KPI assessment to support continuous development. This is on a monthly review, with specific actions determined to address areas.
- Launch Medical has internal training and assessment for all staff thereby ensuring training is targeted at any areas that need developing.
- Quality Department collates all quality records and performs statistical analysis that is discussed at Quality Management meetings to determine corrective and preventive actions.

Incoming Inspection

As part of routine testing, Launch Medical conducts environmental testing using ROHS Tester, and a LED Spectrum Analyser which efficiently and reliably detect non-conforming materials at Incoming Inspection.



ROHS Test

Environmental testing of raw materials to remove potential risk thus ensuring products meet regulatory requirements



LED Spectrum Analysis

Wavelength analysis to check that the product is within the prescribed scope, ensuring products meets requirements

In Process Quality Control



ECG signal simulation test



ECG wave form test



Product function testing



Spo² simulation test

Manufacturing and Inspection Process



Process guidance and training



Finished product inspection



Process inspection & recording



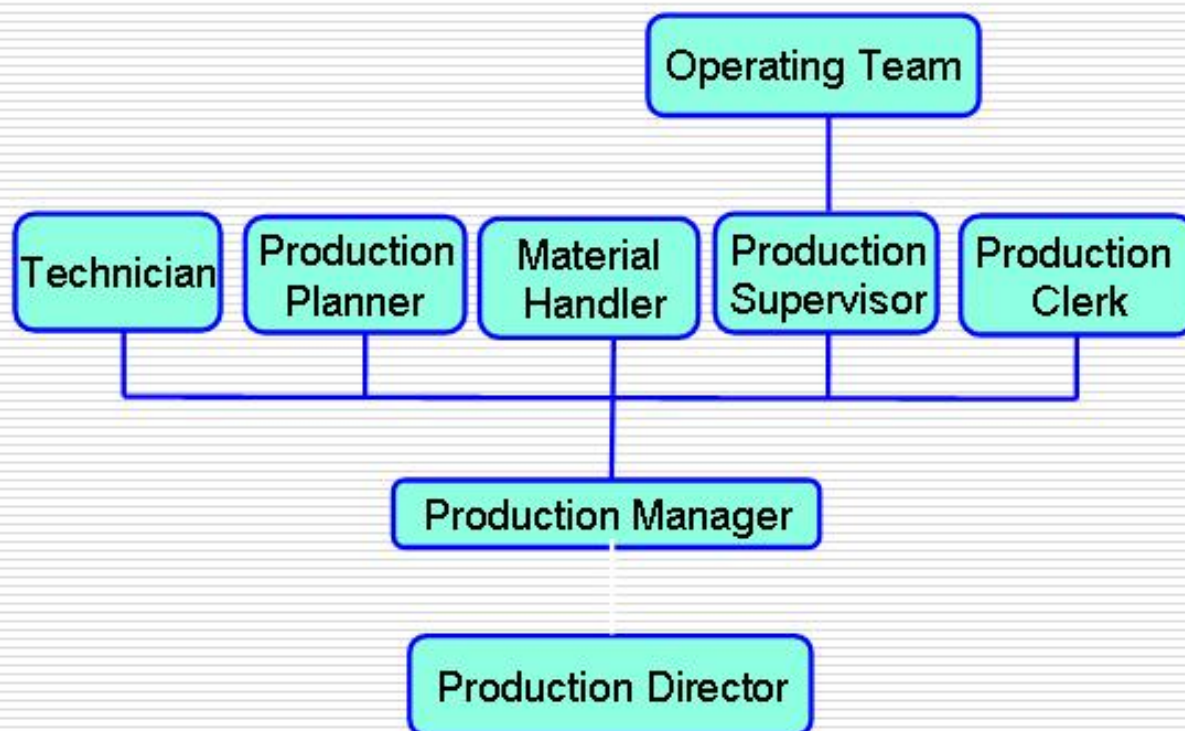
Quality consulting

MANUFACTURING MANAGEMENT

Manufacturing organizational structure and personnel allocation

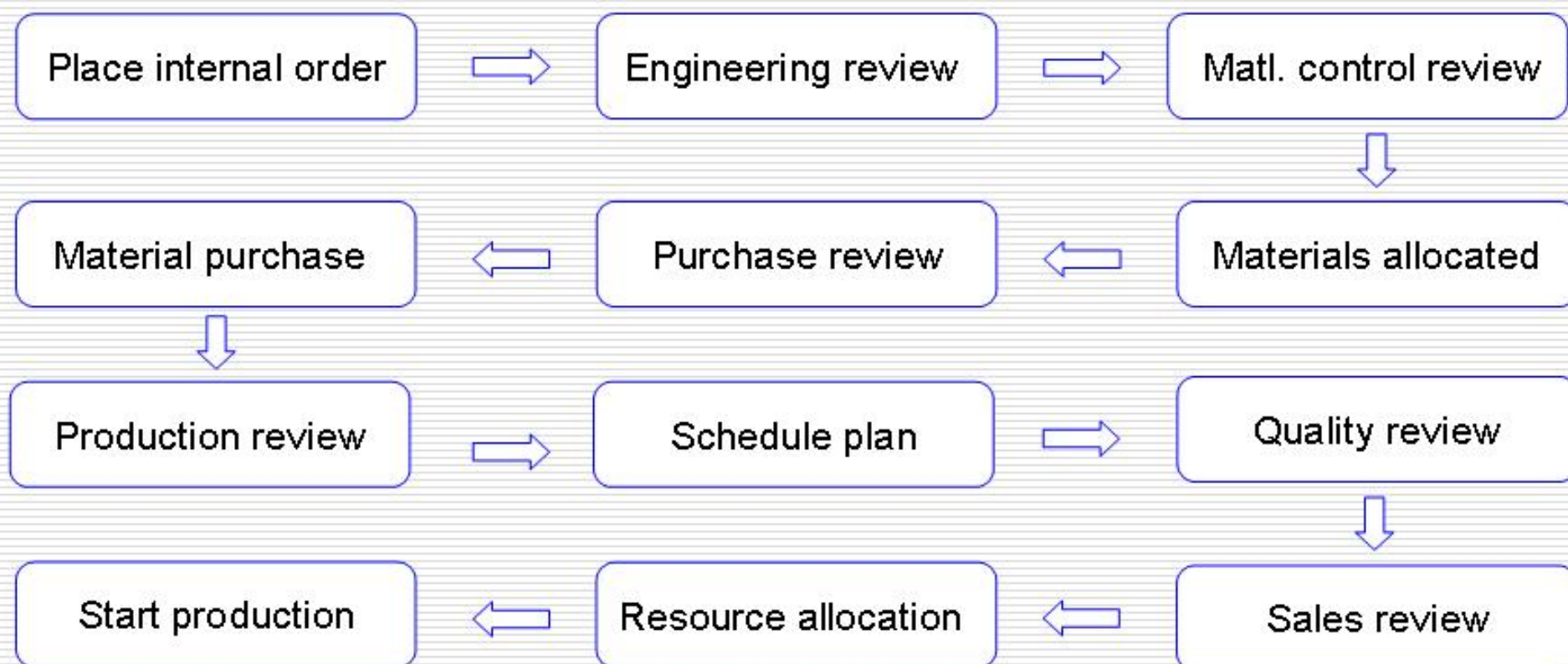
Personnel Allocation

Operating Team :	230
Technician :	4
Material Handler :	2
Production Planner :	1
Production Clerk :	1
Production Manager :	1
Production Director :	1



MANUFACTURING MANAGEMENT

Internal Order Manufacturing Plan



MANUFACTURING MANAGEMENT

Manufacturing Capability

6800 m² Standardized production workshop with 12 professional production lines supported by a stable supply chain, allows for large quantity production as well as fast response to customer changes and specially made custom products.



Workshop Environment

Workshop is divided into four areas;

- Medical cable production workshop
- Medical probe production workshop
- One-time production workshop
- Dust Free workshop & Clean Room



Medical Cable Assembly Lines



Disposable SpO₂ line in Clean Room and Dust Free workshop

Employee Training & Assessment

- Induction training (Factory regulation and policy, product introduction, quality policy/target, production safety, 5S management, etc.)
- Specific process training & inspection training. This is training the necessary contents according to unique processes and environment.
- Upskill training and accreditation to develop employees and multi-skill our team members
- Management training and accreditation based on the skills audit and team development requirements
- Start of shift 5-minute greeting & roll call
- Daily “tool box” talks



REGULATORY COMPLIANCE

- Achieved ROHS environmental protection accreditation since 2007~
- Products produced pass ISO10993 biocompatibility testing
- Class 2 products design & produced have CE approval
- Product design in accordance with AAMI/ANSI EC53 Standards
- All products pass domestic SFDA/CFDA registration
- Product achieved IEC60601 and ISO80601 test standard approval
- Accredited with OEM customers FDA manufacturing place register



Launch Medical Produces

- ECG Cables and Leadwires
- EEG Cables & Electrodes
- EMG Cable & Electrodes
- SpO² Extension Cable & Sensors
- Temperature Probes
- NIBP Blood Pressure Cuff & Tube
- IBP Cable & Pressure Transducer
- OEM & ODM Customer specific specialist cables

PRODUCT INFORMATION

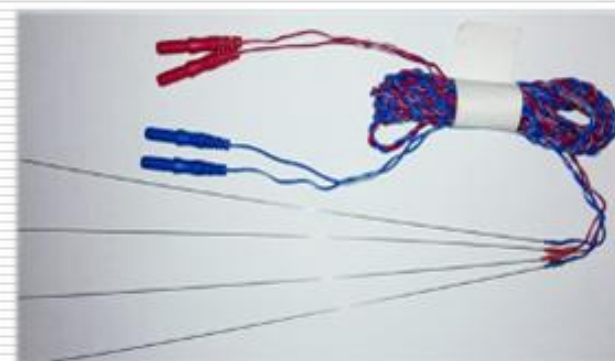
ECG Cable & Leadwire



EKG Cable & Electrodes



EMG Cable & Subdermal Electrodes



Temperature Probes



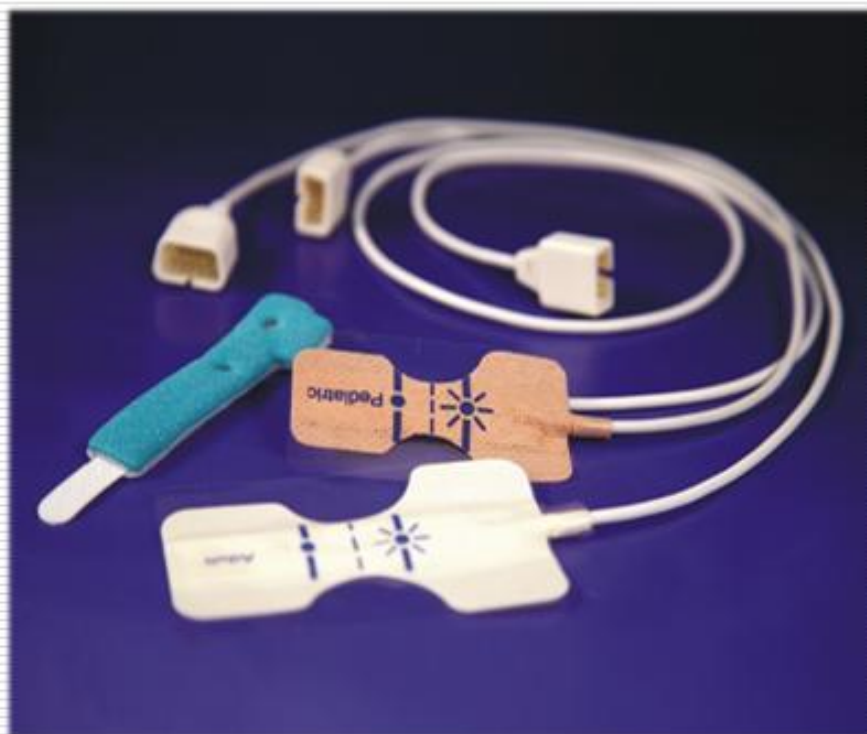
SpO₂ Sensor – Clip Type



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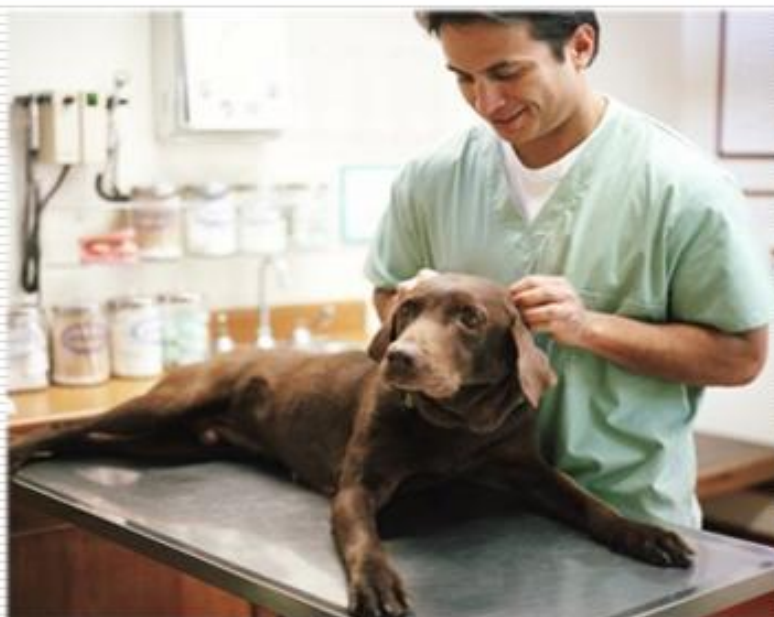
PRODUCT INFORMATION

SpO₂ Sensor – Disposable Type

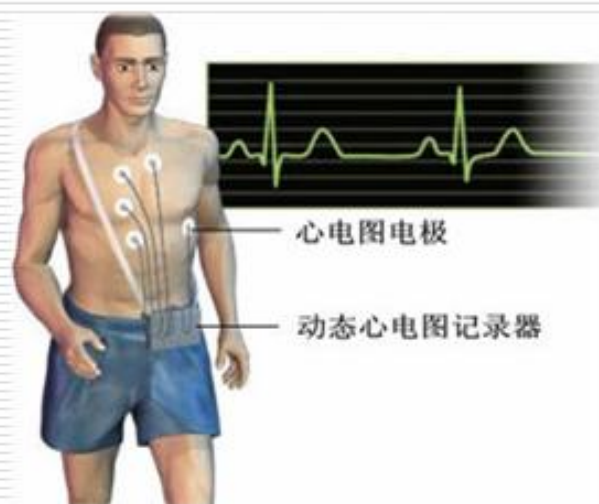


A PROFESSIONAL MANUFACTURER OF MEDICAL ACCESSORIES

Accessories for Animal Use



Holter Cables



IBP Cables



BD



Edward



Philips



Utah



Abbot



Medix

NIBP Cuff & Tubes



Other Medical Accessories



Holter Cable ECG Cable



ESU Pencil & Cable



OEM Connectors



EKG Multi-Link Cable

- R&D spending increased to 8% of Sales with introduction of talent, expanding R&D Facilities and Engineering teams.
- Increasing ownership of our main wire supplier. This ensures fast supply material, as well as specialty prototype cables.
- Have allocated in 2017 budget automation & line upgrades to suit customers products and efficiency.

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OEM PARTNERS

 Medtronic 美敦力	 NIHON KOHDEN	EDAN	
 A Philips Healthcare Company	 Bionet	WILSON·HURD	 Technomed Europe Medical Diagnostic Accessories
 Biocare ®	 宝莱特 BLT BIOLIGHT 医疗监护设备民族品牌领航者	 科曼 COMEN	 杰纳瑞 General Meditech, Inc.
 BEIJING FUKUDA	 choice <small>MMED</small>	 Yasen	 乐普科技 LEPU TECHNOLOGY
 LAND Medical 蓝港医疗	 ZONDAN 重典 用科技改善人类健康	 Miraclin Miraclin Technology Science United JMMB	 OCI SENSING TECHNOLOGY

A PROFESSIONAL MANUFACTURER OF MEDICAL ACCESSORIES

LAUNCH MEDICAL ADVANTAGES

Launch Medical have competitive advantages with a “can-do attitude”, partner level co-operation, quality, cost, supply lead times, and after-sales service.

Launch Medical is large enough to be your Professional Quality Supply Partner, but small enough to integrate customer standards into our systems and procedures.

Launch Medical have established long-term and reliable business partnerships with many famous OEM medical device manufacturers both in China and internationally.

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THANK YOU

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