**Empower Your ORTHOmanufacture** 

# **ORTHOmaterials**<sup>TM</sup>

# 第四届骨科应用材料及工艺技术研讨会

The 4th Seminar on Materials and Processes for the Orthopaedics

#### 2021年7月14日至15日 | 江苏常州中吴宾馆

14 - 15 July 2021 | Zhongwu Hotel, Changzhou, Jiangsu, China

### 会议日程 CONFERENCE AGENDA

2021年7月14日 14 July 2021					
08:00 - 09:00 签到 Registration					
09:00-09:10	欢迎辞 ORTHOMATERIALS   中国区负责人 翁益良	Welcome Speech ORTHOMATERIALS   China Regional Executive YiLiang WENG			
09:10-09:50	3D打印骨科创新器械与临床转化 上海市增材制造协会   副会长 姜闻博	3D Printed Innovative Orthopaedic Devices and Clinical Transformation Shanghai Additive Manufacturing Association   Vice President WenBo JIANG			
09:50-10:30	载PLGA-VAN缓释涂层多孔镁合金支架的研究 江苏省医学会骨科常州分会   主任委员 徐南伟	Study on Porous Magnesium Stent with PLGA-VAN Sustained-Release Coating Changzhou Branch of Orthopaedics Jiangsu Medical Association   Chairman NanWei XU			
10:30-11:00	茶歇 Tea Break				
11:00-11:40	<b>假体设计与生物力学评价</b> 上海交通大学生物医学工程学院   长聘教轨副教授 蔡宗远	Prosthesis Design and Biomechanical Evaluation School of Biomedical Engineering, Shanghai JiaoTong University   Tenure Track Associate Professor TsungYuan TSAI			
11:40-13:00	1:40-13:00 午餐 Lunch				
	加工和测量分会场 Conference of Processing and Measurement	检测和法规分会场 Conference of Testing and Regulation			
	智能化五轴加工-骨科及创伤领域的高端制造技术 GF加工方案   跨技术产品和销售支持经理铣床 陆俊杰	<b>骨科植入物的化学表征</b> 通标(中国)   生命科学部技术经理 童玉玺			
13:00-13:40	Smart Manufacturing with 5-Axis Technology- Advanced Manufacturing in Orthopedics & Trauma GF Machining Solutions   Cross Tech Product and Sales Support Manager Milling James LU	Chemical Characterization of Orthopaedic Implants SGS (China)   Life Science Services Technical Manager Andy TONG			
13:40-14:20	医疗行业质量检测解决方案 蔡司(中国)   产品销售经理 韩定中	<b>骨科植入物的失效分析</b> 毅博科技(中国)  首席工程师 吴丹丹			
	Medical Industry Quality Solution ZEISS (China)   Product Sales Manager DingZhong HAN	Failure Analysis of Orthopaedic Implants EXPONENT (China)   Principal Engineer DanDan WU			
14:20-15:00	实现柔性制造系统的标准 "四步法" 爱路华(中国) 通用行业销售总监 余小华	基于生物学风险管理的医疗器械生物学评价 药明康德医疗器械测试中心   生物相容性实验室及法规事务部主任 左楠			
	"4-Step" Standard Way to Achieve Flexible Manufacturing System EROWA (China)   PPM VP Jack YU	Biological Evaluation of Medical Device based on a Risk Management Process WUXI APPTEC Medical Devices Testing Center   Biocompatibility Laboratory and Regulatory Affairs Director Nan ZUO			

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2021年7月	]14日 14.	<b>July 2021</b>
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18:00-20:00 晚宴 Dinner

	加工和测量分会场 Conference of Processing and Measurement	检测和法规分会场 Conference of Testing and Regulation
15:30-16:10	对UDI器械直接标识验证设计的讨论 FOBA (中国)   医疗行业经理 巴峥桥	骨科医疗器械美国FDA 510 (k)上市申请及策略解析 京宇生物科技   副总经理 杜思宏
	Discussion on the Design of Validation of UDI Direct Marking FOBA (China)   Medical Manager Bridge BA	US FDA 510 (k) Registration of Orthopedic Medical Devices and Strategy Analysis COSMOS BIOMED   Deputy General Manager Anson DU
16:10-16:50	<b>骨板的精密水切割工艺 - 提高加工效率20倍</b> 大地水刀   董事长 陈波	医疗器械临床前动物功效性实验设计要点与策略 金石医疗   创始人兼总经理 李朝辉
	Precision Waterjet Cutting Technology for Bone Plate – Improve the Processing Efficiency 20 times DARDI   CEO Bo CHEN	Key Points and Strategies for Designing Medical Device Preclinical Studies KINGROCK   Founder & General Manager ZhaoHui LI
16:50-17:30	切削液助力骨科产品安全高效加工 巴索(中国)   总经理 刘刚	<b>骨科植入物力学检测样品选型及热点测试解析</b> 铱玛检测(中国)   实验室主任 王美美
	Cutting Fluid Facilitates Safe and Efficient Processing of Orthopaedic Products BLASER (China)   General Manager Gang LIU	Selection of Orthopaedic Implant Mechanical Testing Samples and Typical Tests Interpretation IMA Testing (China)   Laboratory Manager MeiMei WANG
17:30-18:00	互动 Networking	

2021年7月15日 15 July 2021				
	加工和测量分会场 Conference of Processing and Measurement	材料分会场 Conference of Materials		
09:00-09:40	先进计算机断层扫描技术在医疗及骨科的应用 瑞埃德   技术经理 贲彬彬  Application of Advanced Computed Tomography in Medical and Orthopedics RELY   Technical Manager BinBin BEN	PEEK-OPTIMA™ HA增强型材料全球应用法规准入趋势及临床结果分享 INVIBIO   全球战略市场经理 王元媛&法规事务及产品管理亚太区负责人 王海英  Global Technology Trends in PEEK-OPTIMA™ HA Enhanced Regulatory Clearances and Clinical Outcomes INVIBIO   Global Strategic Marketing Manager Carina WANG & Regioba RAPS Leader-Asia Region Helena WANG		
09:40-10:20	先进的复合加工 - 致力提高骨科产品加工效率及性能 马扎克(中国)   部长助理 关海波 Advanced Compound Processing Machine - Committed to Improving the Efficiency and Performance of Orthopaedic Products MAZAK (China)   Assistant Manager Haibo GUAN	骨科器械常用包装设计与材料选择 奥力拓(中国) 质量经理 刘丽莹 Packaging Design and Material Selection for Orthopaedic Devices OLIVER (China)   Quality Manager Alice LIU		
10:20-10:40	茶歇 Tea Break			
10:40-11:20	多孔涂层骨科产品清洗包装工艺 麟科泰(中国)   技术经理 薛昊 Cleaning and Packaging Techniques for Orthopaedic Products with High Porous Coatings LINCOTEK (China)   Engineering Manager James XUE	TC20 (Ti6Al7Nb) 性能及与TC4 (Ti6Al4V) 在骨科应用对比 福雷孔(中国)   总经理 郑铁君 Performance of TC20 (Ti6Al7Nb) and Comparison with TC4 (Ti6Al4V) in Orthopaedics Application FORECREU (China)   General Manager Tiejun ZHENG		
11:20-12:00	Novec <sup>™</sup> 在医疗器械上的清洗解决方案 3M(中国)   首席材料技术专家 陈德伟  Novec <sup>™</sup> Cleaning Solutions in Medical Devices 3M (China)   Chief Materials Technical Expert DeWei CHEN	<b>药物缓释方案在骨科领域的应用</b> 帝斯曼生物医学   高级业务发展经理 白燕辉 <b>Drug Delivery Solution in Orthopaedics</b> DSM Biomedical   Commercial Development Senior Manager Andy BAI		

### 第四届骨科应用材料及工艺技术研讨会

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#### 参展企业 EXHIBITORS LIST

### 材料 MATERIALS

### **!**ALBIS

#### 高性能聚合物致力于医疗器械的材料解决方案,满足客户不同的应用需求。

High performance polymer, dedicated to material solutions for medical devices, to meet customers' different application needs.



## 提供 TC4/TC4ELI/TC20/TA1G/TA2G/TA3G 板、棒、丝材的专业医用钛合金材料制造商。

Professional medical titanium alloy material manufacturer offering sheets, bars and wires in TC4/TC4ELI/TC20/TA1G/TA2G/TA3G.



#### 作为欧洲无菌包装解决方案领航者,我们可以帮助您提供从包装设计到生产阶段的 高品质无菌包装,以及包括无菌吸塑盒、封口膜、泡沫垫和热封的整体解决方案。

As Europe's leading packaging solution provider, we can assist you from the concept to the production phase to manufacture top quality sterile packaging, providing total solution of blister packs, sterile lids, foam, and sealing.



# 可吸收骨科植入材料,具有的生物相容性和生物降解性优势,在运动医学、外伤、颅颌面等手术领域中,可作为治疗肌肉骨骼系统损伤。

Especially developed for resorbable orthopedic implant devices and serve as the matrix in a wide variety of applications to treat injuries such as sports medicine, trauma and spinal surgery.



#### 生产和销售符合医疗行业严苛要求的医疗级塑料板棒,同时提供塑料材料机加工和 注塑服务。

Manufacture and sale of medical plastics sheets and rods which is complied with stringent requirements of the medical industry, and providing plastic material machining and injection moulding services.



## 提供植入级聚醚醚酮 VESTAKEEP®,植入级可降解聚合物 RESOMER®,以及医疗级尼龙等高性能聚合物。

A global leading supplier of high performance polymers for medical application, including implantable PEEK (VESTAKEEP®), bioresorbable polymers (RESOMER®), and PA12 etc.



#### 提供用于生产骨科植入物及手术器械的钛合金和不锈钢中空材,以及聚合物系列植 入物的注塑成型代工。

Supplier of cannulated bars in titanium and stainless steel for the production of orthopaedic implants and surgical instruments, as well as injection molding service of polymers for implants.



### 为医疗器械制造商提供高性能生物材料解决方案的全球领先企业,提供的产品和服务用于脊柱、创伤和骨科医疗领域的组件的制造,旨在研发使用寿命更长的植入式 医疗器械。

A global leader in providing high-performance biomaterial solutions to medical device manufacturers. The company provides products and services for spine, trauma and orthopaedic and dental medical segments for the development of long-term implantable medical devices.



# 生产和销售 PEEK、PPSU、碳纤维复合材料等医用高分子材料,同时可提供相关材料的医疗器械产品代工。

Manufactures PEEK,PPSU,CF/PEEK composite and other medical grade polymers, and also provides OEM manufacturing service for related medical tools.



### 镍钛合金丝材、管材、定型件生产和销售;医疗零部件委托加工和组装一站式服务。

One-stop solution for all things Nitinol: material, design, engineering, testing, production and contract manufacturing for medical devices.



# 全球领先的为医疗器械和制药企业提供灭菌袋、盖材、卷料、袋内支撑卡的专业医用包装公司。

World's leading supplier of innovative pouch product, die-cut lid, roll stock and mounting cards, providing outstanding quality and technical innovation to the global health-care market.



# 90 年欧洲医疗产业原材料供应商,提供骨科植入物和手术医疗器械的钛合金、钴铬钼及不锈钢原材料。

90 years of European medical raw material supplier, providing implantable and instrumental material ranges from titanium alloys, CCM and stainless for medical market.



#### 提供医疗应用的全系列钛材牌号的钛棒及钛板制造厂家。

World's leading producer providing full range of titanium grade in bars and plates for medical application.



#### 作为高性能热塑性塑料挤压和压缩成型技术的世界领先制造商,我们的先进技术使 我们能够将全系列的热塑性树脂转化为棒材、片材和薄膜。

As a world leading manufacturer in extrusion and compression molding technologies of high performance thermoplastics, our advanced technologies allow us to convert the full range of thermoplastic resins into rods, sheets, and film.

### 第四届骨科应用材料及工艺技术研讨会

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### 工艺及服务 PROCESSES AND SERVICES



提供骨科植入物与手术工具的涂层服务,拥有喷涂纯钛、钛合金、羟基磷灰石涂层领 先技术与品质。

Coating service provider for orthopaedic implants and surgical Tools, producing high quality commercially pure titanium (CPTi), titanium alloy (Ti6Al4V), and hydroxyapatite (HA) orthopaedic implant coatings.



在医疗行业提供真空淬火、真空退火、真空钎焊、真空固溶和时效等一系列服务的第三方专业热处理服务商。

Professional heat treatment service provider of vacuum quenching, vacuum annealing, vacuum brazing, vacuum solid solution and aging in medical industry.



生产钴铬钼材质股骨髁/胫骨托/双极头外杯植入物毛坯铸件和不锈钢材质股骨髁试模铸件。

Manufacture of CoCrMo femoral/ tibia/bi-polar implant casting parts, and Stainless steel femoral trial casting parts.



美国FDA及欧盟CE全球取证一站式服务领航者。提供骨科化学表征及毒理学评价、生物相容性测试、动物实验、及欧美注册咨询服务。为全球知名第三方验证公司合作方并为亮宇OECD GLP国际级生物学实验室指定代表。

One-stop shop medical device consulting company provide the material chemical analysis and toxicology evaluation, biocompatibility and preclinical animal testing, US FDA and CE consulting service. We are the global third-party partner and agent of LEON OECD GLP biocompatibility laboratory.



专为医疗器械提供表面处理代工服务,包括:钛金属阳极氧化、不锈钢的钝化和电解 抛光、适用于所有植入物的HA<sup>nano</sup>(纳米羟基磷灰石)涂层。

Focus on providing surface finishing services for medical devices, including titanium anodizing, stainless steel passivation and electrolytic polishing, HA<sup>nano</sup> (Nano hydroxyapatite coating) for all implants.



整合了德国实验室、德国设备制造商及国内优秀资源的第三方植入物检测实验室,使用各类国际先进的检测设备,可以为客户提供各种产品注册检测服务和研发检测服务。

A professional third-party implant testing laboratory by integrating German test service provider, German equipment manufacturer and domestic excellent resources, using a large number of international advanced testing equipments, which can provide customers with various product registration testing services and R & D testing services.



在医疗器械领域我们提供MRI安全性和兼容性测试、失效分析、实验设计和测试、有限元分析、工厂审核、美国和欧盟监管文件提交、植入物取出分析、产品召回相关的技术咨询服务。

As an engineering and scientific consulting firm, we provide technical services including MRI safety and compatibility test, failure analysis, experimental design and testing, finite element analysis, quality assurance and factory audit, regulatory submissions in USA and Europe, explanted device analysis and product recalls in medical device industry.



骨科植入物产品及外科手术器械的力学性能检测服务,具备ISO 17025 II类认证的实验室,检测报告可用于NMPA、CE、FDA产品注册。

Mechanical performance testing services for orthopedic implant products and surgical instruments. Accredited laboratory with ISO 17025 Class II certification, test reports can be used for NMPA, CE, FDA product registration.



instruments.

具有高硬度、良好的结合力、高断裂韧性、低摩擦特性的Medthin™系列涂层,广泛应 用于医学植入物及手术器域中

用于医学植入物及手术器械中。
The Medthin™ series of coatings features high hardness and excellent adhesion, fracture toughness, low friction propertie, and are used on a wide variety of medical implants and



作为一家服务于中高端、创新型医疗器械的第三方检测服务公司,为全球医疗器械研 发生产企业提供专业的临床前大动物实验、生物相容性测试、国内外法规注册咨询、 临床研究、体系与技术定制化培训等服务。

A strategic project integration management platform providing medical device manufacturers with professional preclinical performance testing in vivo, biocompatibility testing, international registration consulting, clinical research, customized quality and customized trainings, etc.



向创伤、脊柱、关节、齿科种植体、工具器械类产品的生产商提供全套超声波清洗及 各项表面处理工艺研发、代工服务、设备及附属设施。

Total solution provider of ultrasonic cleaning, R&D of cleaning and surface treatment process and service of surface treatment for trauma, spine, joint, dental implant and instrument products.



为关节、脊柱、创伤和齿科市场提供一站式的合同制造服务。也是医疗领域铸造、机加工、等离子喷涂和增材制造方面的技术专家。

A fully-integrated, global contract manufacturer for orthopedic, trauma, spine and dental markets and a recognized expert in casting, machining, plasma spray coatings and additive manufacturing technologies in the medical field.



全球唯一的医疗器械研究组织及ISO-10993标准的奠基人,为全球医疗器械企业提供上市前和上市后的测试、法规咨询和临床服务。

The only medical device research organization (MRO), the founder of ISO-10993, providing pre-& post-market testing, consulting and clinical services to medical device companies world-wide



国际公认的检验、鉴定、测试和认证机构,致力于为医疗器械行业提供专业的检测服务,拥有全球领先的GMP合规服务实验室。

World's leading inspection, verification, testing and certification company, with a state-of-the-art clinical pharmacology unit and the global network of GMP-compliance laboratories.



专业第三方检验检测服务平台,为全球医疗器械生产研发公司提供生物相容性试验、 微生物检测、医疗器械包装验证等测试服务。

As third-party professional testing service platform, we provide biocompatibility testing, microbiological testing, medical device packaging verification for medical device manufacturing and research worldwide.



我们的医疗器械测试业务单元具备CMA、CNAS ISO/IEC 17025 ,US FDA GLP、OECD GLP、GMP资质,提供五大核心业务:化学表征、生物相容性、大动物实验、微生物学测试、产品注册申报。一份报告,全球申报。

Our business devision of medical device testing has CMA, CNAS ISO/IEC 17025, US FDA GLP OECD GLP, GMP certification. Our major five business include chemistry, biocompatibility, large animal research, microbiology testing, product registration. We help our client to get one report, for worldwide registration.

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### 设备及辅件 EQUIPMENTS ANDACCESSORIES

prostheses, etc.

medical devices.



Novec™ 特种氟素溶剂为医疗机械以及设备制造商带来增值服务。

Novec™ Engineered Fluids offer a number of advantages for manufacturers of medical devices and equipment.



工装夹具的变革:4个拉钉构成的零点快换系统,具备高精度。我们的产品有快换底板 及顶部夹具组成,广泛应用于精密加工骨板。

Workholding evolved: simple 4 pull stud zero point system, quick changeover with high accuracy. Our products including quick change bases & top toolings are widely used in precision machined orthopedic plates.



全球金属加工液领域活跃的制造商,致力于高质量的切削液和磨削油的研发及生产。 A globally active company in the metalworking fluid sector, developing and producing

, SSLUBE

high-quality cutting and grinding fluids.

外科植入物动态力学解决方案服务商,包括骨钉、接骨板、椎间融合器、髋关节等。

Dynamic mechanical solutions for surgical implants service provider. Consist of metallic medical bone screws, metallic bone plates, intervertebral body fusion device, hip joint

MC 凯尔测控

全球领先的激光器和激光技术的供应商之一,能为医疗行业提供各种高效、精准的激 光切割、焊接、打标、钻孔等解决方案。 COHERENT. As one of the world's leading providers of lasers and laser-based technology, we offer highly

化学指示剂、生物指示剂销往全球100多个国家。



efficient and accurate solutions for cutting, welding, marking and drilling for the medical indus-

全球领先的超声波清洗设备制造商,为医疗器械和植入物等行业提供非标钝化和清洗 The world's leading manufacturer of ultrasonic cleaning equipment, providing customized



passivation and cleaning equipment for medical devices, implants and other industries. 主要提供辐照、环氧乙烷、高压蒸汽、过氧化氢等灭菌方式的灭菌检测耗材,其中灭菌

Mainly provides sterilization testing consumables for sterilization methods such as irradiation, ethylene oxide, high-pressure steam, and hydrogen peroxide. Among them, sterilization chemical indicators and biological indicators are sold to more than 100 countries around the world.

干冰清洗机,使用干冰作为清洗介质,应用于工业设备、模具和产品的清洗,是一种



绿色环保、无损、干燥、不会产生二次污染的清洗方式。 Dry ice cleaning machine, using dry ice as cleaning medium, applied to industrial equipment, molds and products cleaning, is a green, non-destructive, dry, no secondary waste cleaning

高精度超高压五轴水刀,IGEMS-3D软件,快速、智能套料,切割精度达±0.02mm。国 内首创,为钛合金骨科植入体等医疗器械提供高效自动化加工方案。

High accuracy and ultra-high pressure X5 waterjet cutting machine with IGEMS-3D software,

to cut the material faster and intelligently, achieving cutting accuracy up to ±0.02mm. Provid-

ing efficient automatic processing solution for titanium alloy orthopedic implants and other



dom 13d

DARDI 大地水刀

德国 GOM GmbH 在中国的合作伙伴,专业提供成套光学三维扫描和变形测量方案,以 及技术咨询和测试服务。

The partner of German GOM GmbH in China, specializing in providing complete sets of optical 3D scanning and deformation measurement solutions, as well as technical consulting and testing services. 深入学习和应用欧美精密小零件加工解决方案,提升中国医疗客户(创伤、脊柱、关



EROVA

system so**l**utions

In-depth study and application of precision small parts processing solutions in Europe and the United States, improving the production efficiency of Chinese medical customers (trauma, spine, joints, dental implants and other fields), and solving a variety of processing problems.

致力于工装夹具系统、测量设施、机器人、工作管理软件的研发和生产。 A global operation organization for the development, production of tooling system, presetting & measuring device, robot loading system, and job management software.



满足所有加工需求的CAM系统。 CAM solution which meets all machining Requirements.

节、种植牙等领域)生产效率,解决各种加工难题。

用于医疗器械产品直接标识的激光打标机。 Laser marking system for direct marking of medical device.



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molds, dies and high value-added metal parts.

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clamping of whatever-shaped components.

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提供骨科磨削方案的五轴数控磨床制造商,全球医疗领域磨削应用的领跑者 5 axes grinding machines manufacturer and solution provider for orthopaedics, a global leading company in grinding application for medical industry.

A leading provider of machine tools, technical solutions and services for the production of



拥有200多年的精密计量经验,以及对智能制造领域先进技术的重组,为医疗行业提供 贯穿产品全生命周期的质量提升解决方案。

industry, with more than 200 years of experience in precision metering and reengineering advanced technologies in intelligent manufacturing, 对变形敏感的工件、以及对任何形状的零件进行同心补偿的夹持专家。

Specialist in clamping deformation-sensitive workpieces and in the compensating, concentric

Provides quality improvement solutions throughout the product life cycle for the healthcare



**INDEX** 

为医疗产品加工提供高效高精解决方案的多轴自动机床、自动走心车床、车铣中心、

Providing high efficient and high precision technology solutions for medical products by Multi-

spindle automatics, sliding headstock automatic lathes, turn-mill centers and universal



主营研磨抛光设备、研磨耗材、研磨添加剂、以及医疗植入物后道研磨抛光的整体解

Provides polishing machines, polishing media and polishing compounds, and also offers the total solution for the final polishing process of medical implant.



**In MIKRON TOOL** 

工的多样化需求。 5-axis machining center and multi-tasking machines manufactured in our iSMART Factory, fully meet the diversified needs of customers in the medical industry.

以其最高质量和精度、以小尺寸和难加工材料为主的圆形硬质合金刀具,包括直径为 0.1 mm和最大深度为50 x d的刀具。在加工骨板或医用螺钉时提供了表面质量最高、完

诞生于我们的数字化工厂的五轴加工中心、车铣复合加工机等,满足医疗行业客户加

Round carbide cutting tools in the highest quality and precision, with focus on small dimensions and the machining of difficult materials, includes tools with diameters from 0.1 mm and a maximum depth of 50 x d, providing complete and burr-free tooling solutions with the

highest surface quality when machining a bone plate or medical screws.

individual, tailor-made solutions for your business all over the world.

ment and surface morphology characterization more rapid and accurate.

powRgip®冷压刀柄夹持方案更可获得无与伦比的加工效果。

ing system, you can achieve excellent machining results.

喷砂介质、包括氧化锆珠、氧化铝砂和锆刚玉。

套的工艺水处理及光饰耗材。

engineered medical products.

manufacturers.

efficiency.

方案。



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from measuring tool such as micrometer to instruments such as coordinate measurement

machine, vision machine, as well as measurement solutions. 以"切削液公司"著称,我们作为水溶性切削液的顶级专家,为全球客户提供个性化订制 解决方案。 As "The Coolant Company", we specialize in water-miscible coolants, and we provide



以医疗、科学为产业支柱,卓越的光学技术铸就了全球精尖的显微镜产品,让粗糙度 量测和表面形貌表征更快捷准确。 Taking medical treatment and science as the industry pillar, and our excellent optical technol-

ogy has created the world's top-notch microscope products, which makes rough measure-

意大利 Vici Vision 轴类光学测量仪和 Metrios 一键闪测设备销售,以及作为法国 RX



Solutions 中国区总代理提供工业 CT 设备的测试和销售服务。 Key distributor of Vici Vision Optical Measurement Machine and Metrios, also is the Master Distributor of RX Solutions Industrial CT, to provide service and sales in China.

作为ER夹持系统的发明人,我们的产品不但大量应用于各类外科植入物的生产过程中,而且针对MQL微量润滑及CO2干冰冷却等特殊冷却方案,配合我们的专利

As the inventor of the ER clamping system, our products are not only widely used in the production of surgical implants, for special cooling solutions such as MQL micro-lubrication and CO2 low temperature cooling system, in combination with our patented product powRgip® toolhold-



专业设计制造高精度数控机床,广泛应用于医疗、齿科和工业切削刀具的生产磨削。 Specializing in the design and manufacturing of high precision CNC machines for production

grinding of cutting tools and cylindrical grinding for medical, dental and industrial cutting tools.

为骨科植入物、医疗器械及其它工程医疗用品提供各种表面光饰工艺、设备以及相配

Provides finishing processes and equipment aswell as process water treatment and consumables for a variety of surface finishes on orthopaedic implants, medical devices and other



RŐSLER 📣

专注于骨科医疗器械生产领域的技术公司,旨在为广大骨科医疗器械制造商提供金属 或3D打印部件的表面处理技术、介质及相关设备。 As a professional tech support company and equipment supplier in orthopedics industry, we

focus on metal or 3D parts finishing and deburring by providing advanced machines, specific media proprietary technology, and customized solutions to many orthopedic medical device

我们对医疗植入物喷砂工艺有着深入的理解,始终如一地为客户提供可靠的高性能陶瓷



We have developed an in-depth understanding of media behavior on medical implant, and been consistently delivering reliable supply of high-quality ceramic blasting media including zirconia beads, alumina grits, alumina-Zirconia grits with maximized performance and

通过超高性能运动学和5轴联动加工,为医疗产品带来了高效可靠的整体高精加工解决

Providing an efficient and reliable complete high-precision machining solutions for medical

products through the ultra-high performance kinematics with five simultaneous axes machin-



starrag

专注于走芯机医疗小零件加工,提供包括软件、刀具、夹具、切削液、加工方案设 计、试切等系统解决方案。

Focus on CNC machining of medical small parts, providing system solution of software, cutting



SUGIURA杉浦

tools, fixtures, cutting fluid, processing scheme design, product trial cutting etc. 在人工髋关节和椎间盘产品加工领域中,为不同类型的金属和陶瓷材料的球及球窝提 供优化粗糙度和圆度解决方案的超高精度磨床。

Microfinish and Superfinish machines for improving roughness and roundness of different



有着60多年技术经验的工业液体过滤技术权威,一直致力为不同应用领域提供最先进 的无耗材过滤系统。 With more than 60 years of technical experience in the industrial liquid filtration technology

authority, committed to providing the most advanced non consumable filtration system for

types of metal and ceramic balls and cups for Hip and Spinal Implants.



WILLEMIN-MACODEL

Since foundation in 1915, it has been our declared goal to forge ahead in the production of high-quality cutting tools for micromechanics that are valuable and beneficial for our customers. We supply the special precision tools solution for the bone screws, joint parts, cardiovas-

自1915年创立以来,致力于开发、生产和服务微小机械零件的优质刀具。提供骨钉,

try. 我们的医疗行业质量解决方案覆盖金属加工、注塑及增材制造等多种工艺,满足医疗 产业对产品质量管控各环节所提出的更多样化需求,赋能客户跨越医疗质量检测难



Seeing beyond

processing, injection molding and additive manufacturing, we will fulfill various demands from medical industry for quality control, and support our customers to overcome the challenges for medical quality control.

刀具预调仪、刀具测量设备、刀具检测设备、刀具管理软件及自动化解决方案。 Tool presetters, tool measuring machines, tool inspection machines, tool management software, automation solutions.

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different applications.

关,为生命健康护航。 Our medical industry quality solutions cover a wide variety of processes such as metal

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cular components and linear accelerator parts.

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提供各式骨科钻头、骨锉、铰刀、丝锥及各类牙科钻头、丝锥等医疗工具代工及协同 开发服务。

Specialized in providing professional orthopedic instrument OEM and R&D support service, supplying various kinds of orthopedic instrument such as drills, broaches, reamers, taps. Dental drills and taps are also our strength products.



全球化的合约制造商,精密制造加工骨科手术钻头、起子、螺钉、骨板、切割工具,以及其他复杂、高度工程化的外科植入物、器械和手件等。

A global contract manufacturer of precision-machined surgical drill bits, drivers, screws, plates, cutting tools and other complex, highly engineered surgical implants, instruments, and handpieces, as well as other device components.



ODM服务商,提供口腔种植、运动医学、骨科器械、器械盒设计开发、协同开发及受 托生产服务。在刃具切削、产品耐腐蚀方面方案卓越。

ODM supplier providing design, collaborative development and contract manufacture of dental implants, sports medicine, orthopaedic instruments, cases and trays with excellent solutions in sharp tool cutting and product corrosion resistance.



专业代工生产带袢钛板和超高分子量聚乙烯纱线材质的非吸收性外科缝线。

Contract manufacture of ligament fixation device and non absorbable suture made by UHMW-PE fiber.



为美国、欧洲著名医疗客户提供优质的OEM服务,产品包括螺钉、骨板、改锥及器械等,广泛应用于医疗设备、医疗工具、以及脊柱、创伤、牙科、运动医学、颅颌面、眼科、心脏起搏器。

We provide OEM service for the most famous medical customers in USA and Europe. Our products, which include screws, plates, drivers and instruments, are widely used in trauma, spine, dental, sports medicine, cranial maxillofacial, ophthalmic surgery and components of pacemaker.

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