

求实创新，追求卓越
PRAGMATIC INNOVATION
THE PURSUIT OF EXCELLENCE



品质源于
1956



地址/Add: 四川省成都市新都工业大道东段601号
No.601, Eastern Sec Industrial Rd, Xindu Dist, Sichuan, China

公司电话/Tel:
028-83243828

销售电话: 028-83242134

华东片区 (江苏、上海、浙江、福建):
028-83258061 021-33703787

华北片区 (山东、河北、河南、):
028-83259282 028-83249579

华中片区 (安徽、湖北、湖南、江西、广东、广西):
028-83243290 028-83257552

西部片区 (重庆、四川、贵州、云南、甘肃、陕西、青海、宁夏、西藏、新疆):
028-83246516 028-83242077 028-83258627

北方片区 (黑龙江、吉林、辽宁、天津、北京、山西、内蒙古):
028-83246702 028-83259721 028-84360497

外贸及相关业务/Tel: 028-83271096 028-83246491 028-83242241

市场办/Tel: 028-83246491

技术服务/Tel: 028-83242167/028-83269358

传真/Fax: 028-83242075

网址/Web: www.ctri.com.cn

MJS系列 激光干涉仪

MJS Series Laser Interferometer Products

成都工研



成都工具研究所有限公司
CHENGDU TOOL RESEARCH INSTITUTE CO.,LTD



COMPANY PROFILE

公司简介

成都工具研究所有限公司（以下简称“工具所”）1956年创建于北京，是原国家机械工业部直属的我国机械行业唯一的综合性工具科研开发机构，1965年内迁至成都。1998年经国家科技部批准，成为“国家精密工具工程技术研究中心”和“国家工具生产力促进中心”的依托组件单位。1999年转制为科技型企业，进入中国机械工业集团有限公司。

Chengdu Tool Research Institute Co.,Ltd (hereafter CTRI) is founded in 1956 and formally under the direction of China's Machinery Ministry as the sole comprehensive tool researching and scientific developing institution of China's Machinery industry. CTRI moved to Chengdu in 1965. Approved by Ministry of Science and Technology, CTRI became the supporting institution of State Precision Tool Engineering Technology Research Center in 1998. It was later approved into China National Machinery Industry Corporation (SINOMACH) and transformed to a scientific and technological enterprise in 1999.

工具所主要从事精密切削刀具、精密测量仪器和表面改性技术三大类机械产品共性技术研究及其高新技术产品的开发与生产。已形成了以硬质合金石油管螺纹梳刀为主导并逐步发展了轴承刀具、超硬刀具、数控刀具、深孔加工刀具、汽车刀具、型线刀具、配套刀具、齿轮测量仪器、主动量仪、激光干涉仪、工具专机以及PVD、CVD、PCVD涂层技术服务、QPQ盐浴复合处理技术与装备等多种产品并存的产业结构。

CTRI is mainly engaged in precise cutting tools, measuring instruments, surface modified technique and advanced technological products. With the leading development of carbide chasers for oil pipe, CTRI extends products varieties for more industry structures, including bearing inserts, PCD/CBN cutting tools, CNC cutting tools, deep hole machining tools, automobile cutting tools, profile cutting tools, coupling tools, gear tester, in process gauge, calibration laser interferometer, special machines, and PVD, CVD, PCVD coating technical service, QPQ salt bath treatment technology and equipment.

Historical Evolution

历史沿革

成都工具研究所是原国家机械工业部直属的我国机械行业唯一的综合性工具科研开发机构，主要从事切削刀具、测量仪器及机电一体化设备的研制、开发、生产、销售及技术咨询、技术服务、成果转让、进出口业务等。本所创建于1956年，1965年从哈尔滨迁至成都，1994年被认定为“高新技术企业”，1996年取得进出口经营权，1998年国家科技部批准为“国家精密工具技术研究中心”的依托单位，1999年5月经国家经贸委批准，进入中国机械装备（集团）公司，转制为科技型企业，2000年通过国家ISO9001质量体系认证。2001年经国家经贸委批准，以成都工具研究所为主要发起人，联合湖南大学、江苏大学、重庆渝化高技术陶瓷有限公司等单位，发起设立了“成都工研科技股份有限公司”。

Chengdu Tool Research Institute formerly under the direction of the Ministry of Machinery Ministry, is the sole comprehensive R & D institution in China's tool industry. CTRI Mainly engages in cutting tools, measuring instruments and the research, development, production, and sales of electromechanical integration equipment, and technical advice, technical services, achievement transfer, import and export business, etc. The institute was founded in 1956 and moved from Harbin to Chengdu in 1965. Then it was identified as "high-tech enterprises" in 1994. The institute was entitled to operate import and export in 1996 and approved as supporting institute for "national precision tools and technology research center" by the State Ministry of science and technology in 1998. CTRI was transformed into science and technology enterprises and incorporated into China machinery (Group) company under the instruction of State Economic and Trade Commission in May 1995. After the reform, CTRI went through the national ISO9001 quality system certification in 2000. CTRI as the main sponsor, together with The Joint Hunan University, Jiangsu University, Chongqing high tech ceramics Co., Ltd. and other units, initiated the establishment of the "Chengdu Engineering and Technologies Inc" under the approval of State Economic and Trade Commission in 2001.

成都工研



成都工具研究所有限公司

品质源于
1956

行业地位

Industry Status

成都工具研究所是我国工具行业科研、技术的领头羊、行业归口所，以下组织挂靠在我所：
Chengdu Tool Research Institute is a leading scientific research and technology center in China tool industry. It also works as a supporting institute for the following organizations:

- 中国机械工业金属切削刀具技术协会
China metal cutting tool Engineering Association
- 中国机床工具工业协会工具分会
China Machine Tool & Tool Builder's Association Tools Branch
- 中国仪器仪表学会机械量测试仪器学会
China Instrument and Control Society
- 国家刀具质量监督监测中心
National Tool Quality Supervision and Monitoring Center
- 机械工业量具量仪产品质量监督检测中心
Mechanical industrial measuring instrument products Quality Supervision Testing Center
- 国家进出口商品检验局刀具认可实验室
China Import and Export Commodity Inspection Bureau tool accredited laboratory
- 国家进出口商品检验局量具量仪认可实验室
China Import and Export Commodity Inspection Bureau measuring instrument for Laboratory Accreditation
- 科技成果检测鉴定国家级检验机构（刀具）
Scientific and technological achievements identification of national inspection agency (tool)
- 科技成果检测鉴定部级检验机构（量具量仪）
Science and technology achievements inspection level inspection

- agency (measuring)
全国刀具标准化技术委员会秘书处
The tool Standardization Technical Committee Secretariat
- 全国量具量仪标准化技术委员会秘书处
The measuring tool and instrument Standardization Technical Committee Secretariat
- ISO/TC 29（工具）P成员国内归口单位
ISO/TC 29 (tool) P members internally controlled unit
- ISO/TC213（产品的几何和几何技术规范及检验）P成员国内归口单位
ISO/TC213 (geometry and geometry specification and inspection of products) P members internally controlled unit
- CNACL 国家认可实验室
CNACL National Laboratory Accreditation
- 《工具技术》杂志社
Tool Engineering
- 国家精密工具生产力促进中心
National Precision Tool Productivity Promotion Center
- 中国机械工业金属切削刀具技术协会
China metal cutting tool Engineering Association
- 中国机械工程学会生产工程分会切削专业委员会
China Institute of mechanical engineering, production engineering branch, cutting Committee
- 四川省机械工程学会机加工专业委员会
Sichuan Mechanical Engineering Society Machine processing professional committee

科研成果

Scientific Achievements

自成都工具研究所成立以来，主要取得以下科研成果：
Followings are main scientific achievements since the foundation of CIRT：

- 一、国家发明奖三项：
three National Invention Awards
齿轮整体误差测量新技术 发明二等奖
The second prize in new technology of integrated error measuring gear Invention
- 单晶金刚石钎焊工艺及焊料 发明二等奖
The second prize in mono-crystalline diamond brazing technology and solder Invention
- 无锡易磨高性能高速钢 发明三等奖
The third prize in Wuxi easy grinding high speed steel
- 二、国家科技进步奖八项
Eight "the national science and technology progress awards"
量具刀具产品标准的制定和贯彻 二等奖
The second prize in The formulation and implementation of measuring tool products standard
- 中模数硬质合金齿轮滚刀 三等奖
The third prize in the module of carbide gear hob
- 立方氮化硼聚晶机理及其应用 三等奖
The third prize in PCBN mechanism and application
- 涂层硬质合金刀片成套技术及装备研究 三等奖
The third prize in researching coated carbide inserts integrated technology and equipment
- QPQ盐浴复合处理技术及成套设备 二等奖

- The second prize in composite treatment technology for QPQ salt bath and complete sets of equipment
- 机电一体化发展预测与综合分析（合作项目）三等奖
The third prize in Electromechanical integration development prediction and comprehensive analysis (cooperated projects)
- 材料动态断裂性能研究及其在典型机械零部件上的应用（合作项目）三等奖
Research on dynamic fracture properties of materials and its application in the typical mechanical parts on the (cooperated project) the Third prize
- 机械工业共性数据库（合作项目）二等奖
The second prize in Machinery industry common database (cooperated projects)

- 三、省部科技进步奖
The Provincial Department of science and Technology Progress Award
121项（略）
121 items (omission)



品质源于 1956

人力资源

Human Resources

全所共有职工500余人，其中科技人员320人，有突出贡献的国家级专家3人，享受国家政府津贴26人，省部级专家15人，研究员级高级工程师27人，高级工程师103人，高级会计师、高级经济师10人、中级技术人员140人，硕士研究生14人，大中专生146人，专业涉及机械、金属材料、电子、计算机、机电一体化等专业。

CTRI presently has almost 500 employees, 320 of whom are technical staff, 3 state-level experts with outstanding contribution, 26 recipients of government special allowance, 15 ministerial level experts, 27 professor level senior engineers, 103 senior engineers, 10 senior accountants and senior economists, 140 intermediate technical staff, 14 with master degree, 146 with college diploma and employees are widely involved in machinery, metal materials, electronic, computer, electromechanical integration specialty.

核心竞争力

Competitive Advantages

目前成都工具研究所已在刀具材料、精密复杂成形刀具与数控刀具设计及加工技术、刀具表面强化改性技术与装备、大型精密量仪设计制造、激光测量及光电传感器技术以及计算机软件等技术领域，形成了独特的整体、核心成套技术优势，初步构成了以硬质合金石油管螺纹梳刀、硬质合金精密异形刀具、超硬刀具、刀具表面强化技术及装备、齿轮测量仪、激光测量仪等六项主导产品，包含30多项核心、高新技术产品的产品技术结构，这些产品和技术大都处于国内领先或国际先进水平。

Chengdu Tool Research Institute has formed a completed and unique technical competitive advantages in tool material, precise and complex shaped cutter and NC tool design and processing technology, cutting tool surface modification and strengthening technology and equipment, large-scale design precision instrument manufacturing, laser and photoelectric sensor technology and computer software technology. It initially formed six leading products including carbide treading tools for oil pipe, carbide precision special-shaped inserts, super hard cutting tools, tool surface strengthening technology and equipment, gear measuring instrument, laser measuring instrument. Those products are supported by more than 30 core, high-tech products technology structure and most of these products and technology are leading technologies in the domestic and international advanced level.



质量控制

Quality Control

质量认证:

ISO9001:2008

Quality Certification:

ISO9001:2008

质量方针:

以技术创新为先导，以质量管理为保证，以持续改进为核心，以顾客满意为目标。

Quality policy:

To make technical innovation as the guide, the quality of management as the guarantee, continuous improvement as the core and take customer satisfaction as the goal.

质量目标:

- ★贯彻ISO9001：2008标准，通过ISO9001：2008质量管理体系认证，并保持体系有效运行。
- ★技术不断创新，每年设计开发新产品或新项目2项以上。
- ★以质量管理为保证，加强过程控制，实施持续改进，产品质量精益求精，确保产品出厂合格率达100%。三年内使主导产品合格率提高到95%以上，成品交检批次合格率达到95%。
- ★以顾客为关注焦点，增进顾客满意，三年内使顾客满意率达98%以上，顾客投诉解决率达到100%。
- ★顾客重大投诉为零，重大质量事故为零，重大设备安全事故为零。

The quality objectives:

- ★in carrying out the standard of ISO9001:2008, through the ISO9001:2008 quality management system certification, and keep

the system running effectively.

- ★ technology innovation, design and develop more than 2 new products or new projects each year
- ★to guarantee the quality management, strengthen the process control, carry out continuous improvement, refine on product quality, to ensure 100% products manufactured pass rate. Increase leading products pass rate to 95% in three years and the finished product inspection pass rate to 95%.
- ★customer focus, improve customer satisfaction, three years to make customer satisfaction rate reaches above 98%, to solve customer complaint rate reached 100%.
- ★customer major complaints to zero, a major quality accidents to zero, zero accident of major equipment.



品质源于
1956▶

服务管理

Service management

服务宗旨：

全心全意为用户服务

服务承诺：

尽可能满足用户的合理需求

服务标准：

快速、及时、有效，向用户提供一流产品和一流服务

Service Aim : put one's heart and soul into service for the user

Service Commitment: to meet the reasonable needs of users as far as possible

Service standards: rapid, timely, effective, provide first-class products and first-class service to users

企业合作

Business cooperation

- 与联合国合作建立中国量仪基地
- 与德国Klingelnberg公司合作，锥齿轮测量技术出口德国
- 广范与国外公司进行技术交流与合作
- 与国内大专院校、大型企业进行广范的技术交流与合作
- 与英国普法永道咨询公司合作，全面提升企业形象和管理能力

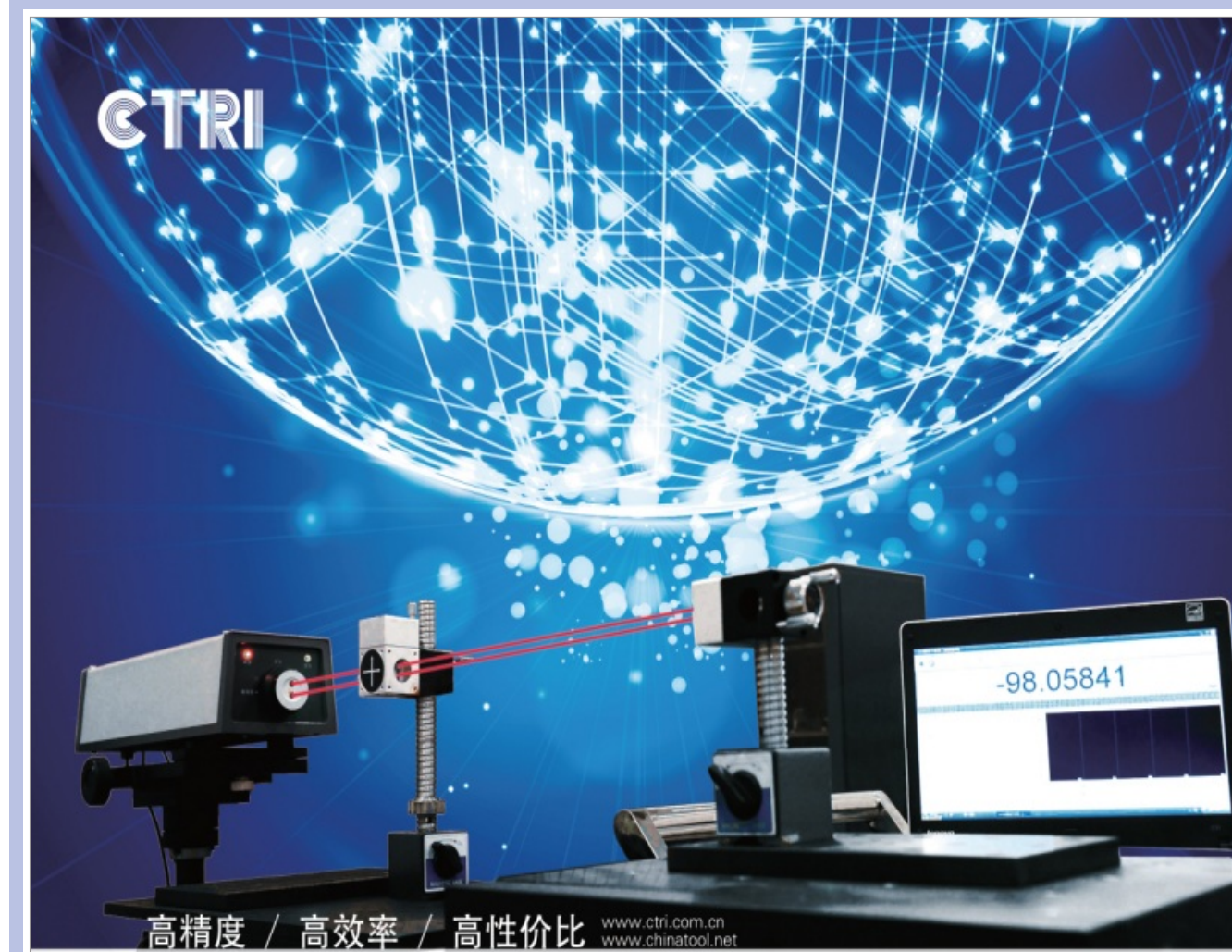
- cooperation with the United Nations to establish Chinese instrument base
- cooperation with Klingelnberg (Germany), bevel gear measurement technology exported to Germany
- technological exchanges and cooperation with foreign companies
- A wide range of cooperation and technological exchanges with colleges, universities and large domestic enterprises
- cooperation with British consulting company to improve corporate image and management ability

简介

成都工具研究所有限是国内重要的大型精密测量仪器研发生产企业，长期从事精密测量仪器领域的共性基础技术研究及其高新技术产品的开发和生产；激光干涉测量技术是成都工具研究所在精密测量领域的突出代表及重点发展方向，拥有多项发明专利及专有技术。是国内最早，迄今唯一能够批量生产该产品的企业，其MJS系列激光干涉仪产品在国内已有众多用户。

Introduction:

CTRI is an important domestic research and production enterprise for large precision measurement instruments, and has long been engaged in common basic technology research and high technology products development in the field of precision measuring instruments. Laser interferometry is CTRI's outstanding representative in the field of precision measurement and key development direction that owns a number of invention patents and proprietary technology. So far, hundreds of laser interferometer have been sold and CTRI is the only domestic supplier for mass production of laser Interferometer.



高精度 / 高效率 / 高性价比

www.ctri.com.cn
www.chinatool.net

每一台MJS系列激光干涉仪产品均已通过准确的精度校准和严格的可靠性试验，建议您进行定期检定。

Each MJS series laser interferometer products has passed the exact precision calibration and rigorous reliability testing, we recommend that you carry out regular checks.

发展历程

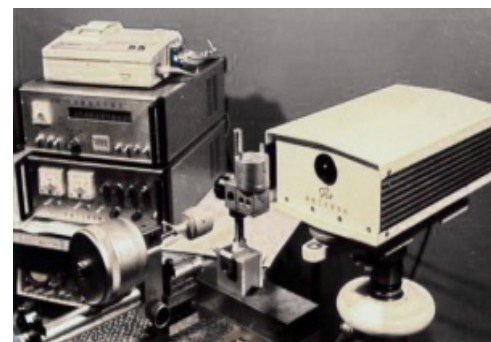
Development

1973年：开始研制微晶玻璃激光器；
1973: Started to develop microcrystal glass laser



1981年：研制成功采用微晶玻璃激光器的双频激光干涉仪（第一代产品），获机械工业部科技进步二等奖；

1981: Successfully developed double-frequency laser interferometer by using microcrystalline glass laser(the first generation product), which awarded Mechanical Industry Department of Scientific and Technological Progress - second prize



1986年：研制采用进口激光器的热稳频技术并推出MJS5系列激光干涉仪（第二、三代产品），获国家火炬计划实施优秀奖；

1986: Thermal frequency stabilization technology applied in the imported laser and developed MJS5 series laser interferometer (the second and third generation product), which awarded The Recognition Award in National Torch Plan



2009年：主持国家科技重大专项“高性能激光测量系统”课题研究；参与“光刻机用双频激光干涉仪研发”课题研究；

Presided the national science and technology major projects "high-performance laser measurement system" and participated in "The research of double-frequency laser interferometer apply in lithography "

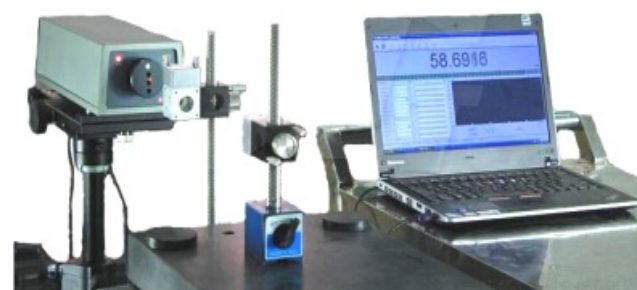
2010年：推出基于双纵模稳频技术的高速激光干涉仪（第四代产品），并获四川省科技进步一等奖；

2010: Developed high speed laser interferometer based on double longitudinal mode frequency stabilization technology (fourth generation product), which awarded The Scientific and Technological Progress of Sichuan Province - first prize



2011年：集成优化，推出小型化的MJS6系列激光干涉仪（第五代产品）；

Developed the integrated optimization and miniaturization of MJS6 series laser interferometer (fifth-generation products)



主要用途

● MJS系列激光干涉仪是检定数控机床、坐标测量机位置精度的理想工具。检定时可按照规定标准处理测量数据并打印出误差曲线，为机床的修正提供可靠依据。

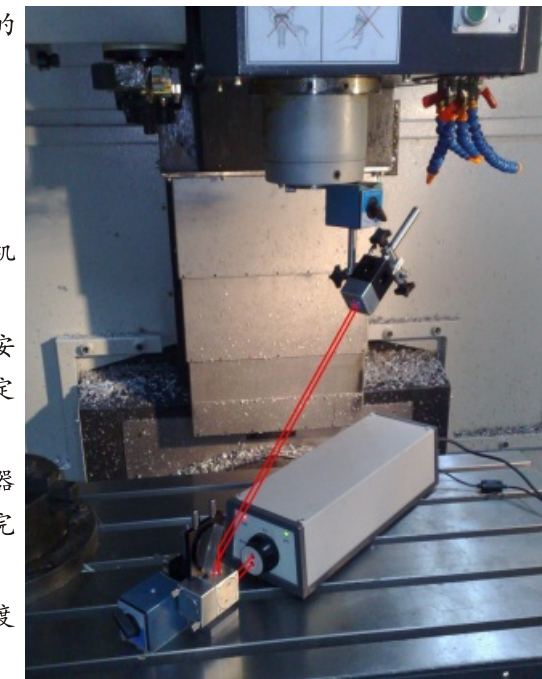
● MJS系列激光干涉仪配有各种附件，可测量小角度、平面度、直线度、平行度、垂直度等形位误差，在现场使用尤为方便。

● MJS系列激光干涉仪可方便地安装在测长机上，取代原测长机的坐标系统，作为一般计量室中的长度基准。

● MJS系列激光干涉仪又是一种高精度的位移传感器，可直接安装于坐标镗、螺丝磨等精密机床及坐标测量机上作为坐标系统，使定位精度大为提高。

● MJS系列激光干涉仪具有对光栅、磁栅、线纹尺、感应同步器等精密测量元件的检测和刻划定位功能，仪器可按预定的间距自动完成检测和刻划工作。

● MJS系列激光干涉仪与圆分度器结合成一套高精度长度-角度比相计，可用于机床传动链，丝杆螺旋线等误差的测量。



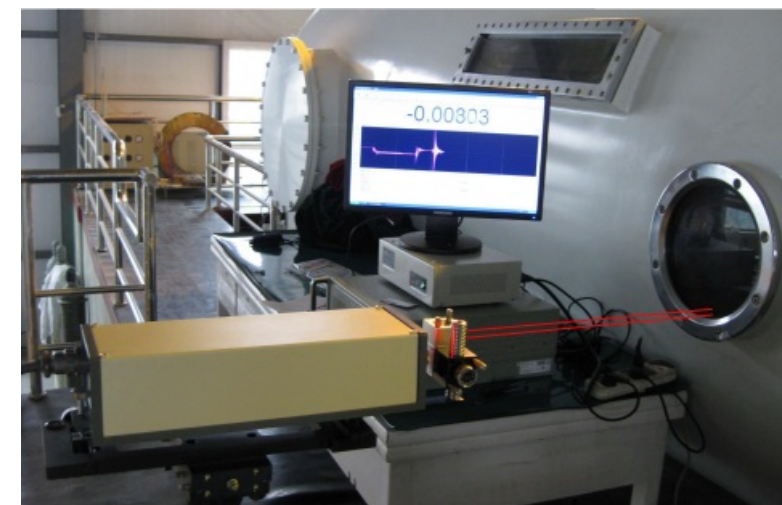
Application:

● MJS series laser interferometer is an ideal tool to test the position accuracy of CNC machine and coordinate measuring machine. The test data can be processed in accordance with the prescribed standard and error curve can be printed out, thus provides a reliable basis for the correction of the machine.

● MJS series laser interferometer provides a variety of accessories and measures geometric error evaluation such as small angle, flatness, straightness, parallelism and the verticality. It is particularly convenient in production field.

● MJS series laser interferometer can be easily installed on the measuring machine, replacing the coordinate system of the original length measuring machine as the standard of general measurement office.

● MJS series laser interferometer is a high precision displacement sensor and can be installed directly to precision machines such as coordinate boring machine, screw grinding and coordinate measuring machine as a coordinate system, so that the positioning accuracy can be greatly improved.



● MJS series laser interferometer demonstrates the detection and ruling function on precision measuring elements such as grating, magnetic grid, lined ruler, inductosyn. The instrument can automatically detect at a predetermined interval.

● The combination of MJS series laser interferometer and circular protractor is a high precision length-angle phase meter, can work as a measurement system for machine transmission chain and screw helix.

特点

- 特殊制作的进口激光器，工作寿命达10年以上。
- 高性能稳频系统保证了仪器的稳定性。
- 独特的细分技术，分辨率高，工作可靠。
- 激光波长自动修正，特别适合工厂车间现场使用。
- 丰富的应用软件、迅速的按相关标准处理测量数据。
- 模块化的结构，体积小，重量轻。



Features:

- Specially imported laser, the working life for 10 years;
- High-performance frequency stabilization system improves the stability;
- A unique subdivision technique, high resolution and reliable operation;
- The wavelength of the laser is automatically corrected, especially suitable for factory workshop application;
- Rich application software, quickly deal with the measurement data according to relevant standards;
- Modular structure, small volume and light weight.

功能

型 号	MJS5A	MJS5B	MJS5C	MJS6A
长度测量	√	√	√	√
角度测量	√	√	√	√
平面度测量	—	—	√	—
直线度测量	—	—	√	—
垂直度测量	—	—	√	—
平行度测量	—	—	√	—
激光波长自动修正	√	—	√	√

Functions:

Order No.	MJS5A	MJS5B	MJS5C	MJS6A
Length Measurement	√	√	√	√
Angle Measurement	√	√		√
Flatness Measurement	—	—	√	—
Straightness Measurement	—	—	√	—
Verticality Measurement	—	—	√	—
Parallelism Measurement	—	—	√	—
Wavelength automatic correction	√	—	√	√

MJS5系列配MJS5210激光头组件，MJS6系列配MJS6210激光头组件。

MJS 5 series assemble MJS 5210 laser head, MJS 6 series assemble MJS6210 laser head

MJS5A和MJS6A为基本型，主要用于数控机床、坐标测量机等精密设备的位置精度检定；其中，MJS6A测量速度快，分辨率高，而MJS5A价格较低。

MJS5A and MJS6A is basic type mainly used for location accuracy test of CNC machine tools, of coordinate measuring machines and of other sophisticated equipment.

MJS6A is high measurement speed and high resolution ratio, while MJS5A is low prices.

MJS5B为专用型，具有外采样和主动发讯功能，可根据用户要求配做各种激光测量、定位系统，同时也具有MJS5A的基本功能。

MJS5B is dedicated type with external sampling and active signaling functions according to user requirements to equip variety of laser measuring, positioning systems, as well as the basic functions of MJS5A.

MJS5C为多功能型，除具备MJS5A的基本功能外，还可测量角度、平面度、直线度、垂直度、平行度等。

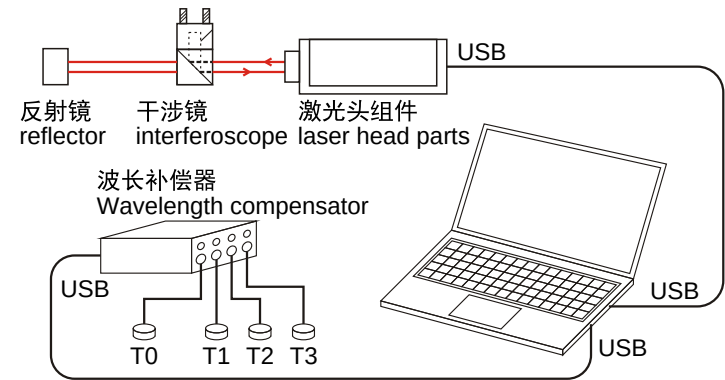
MJS5C is multi-functional type, exception of the basic functions of MJS5A, with measuring the angle, flatness, straightness, squareness, parallelism and so on.

MJS系列激光干涉仪均需配备一台笔记本电脑用于数据存储处理及误差评定，也可采用插板式PC，用于开发以激光为传感器的高精度多坐标测量系统。

MJS series of laser interferometer required to be equipped with a laptop computer for data storage and processing and error evaluation, may also with insert plate PC, for the development of high-precision, multi-coordinate measuring system based on laser-sensor.

基本组件

Basic module:



● MJS5210/ MJS6210激光头组件：MJS5210/ MJS6210 laser head parts

进口He-Ne激光器及电源

Import He-Ne laser and power

光学组件

Optical accessories

稳频系统

Frequency stabilizing system

数据采集、USB传输系统

Data acquisition and USB transmission system



Laser Specifications:

电 源	100-240VAC, 50/60Hz, 50W(Max)
尺 寸	400×134×95
工作环境温度	0-40℃
稳 频 精 度	±0.05ppm
激 光 功 率	<1mw
预 热 时 间	≤15 min

Power Supply	100-240VAC, 50/60Hz, 50W(Max)
size	400×134×95
Working Temperature	0-40℃
Frequency stabilization accuracy	±0.05ppm
Laser power	<1mw
Total Warm-up time	≤15 min

● MJS5460 波长补偿器：MJS5460 Wavelength compensator

1-3个材料温度传感器：

1-3 Material temperature sensor

1个空气温度传感器：

1 Air temperature sensor

1个空气湿度传感器：

1 Relative humidity sensor

1个空气压力传感器：

1 Air pressure sensor

可接长电缆线：

Extension cable



	温度传感器	气压传感器	空气湿度传感器	补偿盒
精度	$\pm 0.1^{\circ}\text{C}$	$\pm 1\text{ mbar}$	$\pm 6\% \text{ RH}$	
尺寸	$\Phi 30 \times 15$	置于补偿盒内		$120 \times 70 \times 60$
	Air temperature sensor	Air pressure sensor	Humidity sensor	Compensation magazine
Accuracy	$\pm 0.1^{\circ}\text{C}$	$\pm 1\text{ mbar}$	$\pm 6\% \text{ RH}$	
Size	$\Phi 30 \times 15$	In compensation within the box		$120 \times 70 \times 60$

● MJS5300 三脚架和云台: tripod and holder

三脚架高度0.5-1.8M:

Height of the tripod

水平指示:

Horizon indicating

云台可调激光头平移、偏摆、俯仰:

Laser head can translation, deflection and pitching on holder



● 系统包装箱: Packing cases

高分子聚合材料:

Polymer materials

一体注塑成型，坚韧抗压:

Injection molding, strong compressive

自带拉手、滚轮:

With handle and wheel

尺寸: $580 \times 40 \times 90$

size: $580 \times 40 \times 90$

装箱总重量: 25 Kg

The total weight packing



测量附件

Measuring attachment

● 长度测量: Length measurement

长度干涉镜及反射镜:

Length interferoscope and reflector

可接长连接杆:

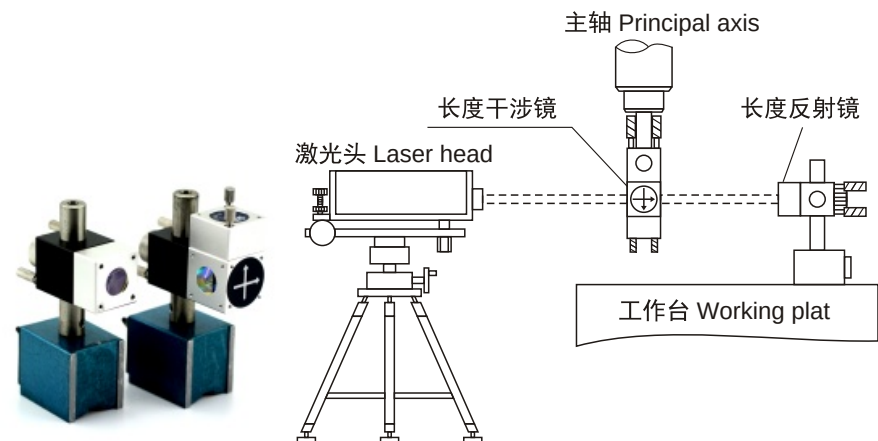
Extension long link rod

磁力表座:

Magnetic table mountain

对光指示靶:

Indicator light target



型 号	MJS5A、MJS5C	MJS6A
测量范围	0-20m	
测量速度	200mm/s	1000mm/s
测量精度 (接MJS5460波长补偿器)	$\pm 0.5\text{ppm}$	
测量分辨率	$0.16\text{ }\mu\text{m}$ 、 $0.02\text{ }\mu\text{m}$	$0.01\text{ }\mu\text{m}$
评定软件	MJS5610机床位置精度评定软件	
相关标准	GB17421.2-2000 ISO230-2 VDI/DGQ3441 NMTBA	

Order No.	MJS5A、MJS5C	MJS6A
Measurement Range	0-20m	
Measurement Speed	200mm/s	1000mm/s
Measurement Accuracy (assembled MJS5460 Wavelength compensator)	$\pm 0.5\text{ppm}$	
Measurement resolution	$0.16\text{ }\mu\text{m}$ 、 $0.02\text{ }\mu\text{m}$	$0.01\text{ }\mu\text{m}$
Evaluation Software	MJS5610 Machine tool position accuracy evaluation software	
Relevant standard	GB17421.2-2000 ISO230-2 VDI/DGQ3441 NMTBA	

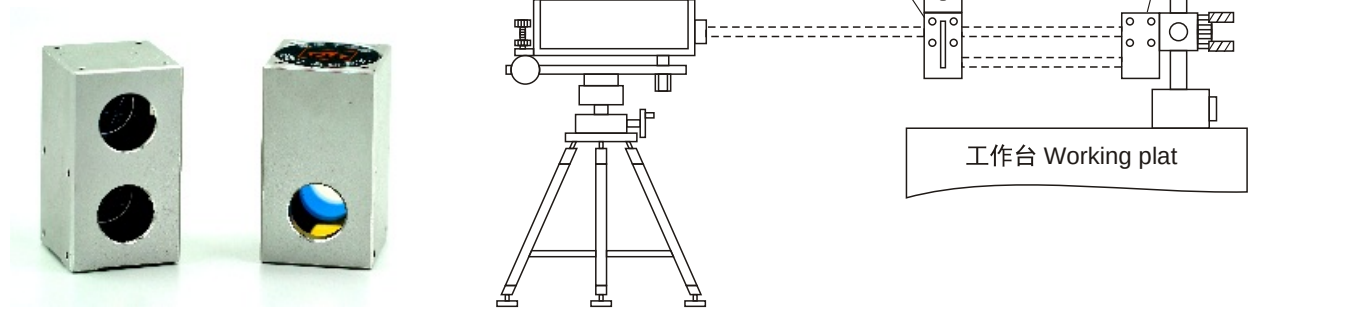
● 角度测量: Angle measurement

MJS5420 角度附件:

Angle accessories

角度干涉镜及反射镜

Angle interferoscope and reflector



型 号	MJS5C	MJS6A
测量范围	$\pm 10^{\circ}$	$\pm 5^{\circ}$
轴向范围	15m	10m
测量精度	$\pm (0.002\theta + 0.1 + 0.05L)''$	$\pm (0.002\theta + 0.05 + 0.05L)''$
	θ 为显示值(单位: 角秒); L 为测量距离(单位: m)	
测量分辨率	$0.1''$	$0.05''$

Order No.	MJS5C	MJS6A
Measurement Range	$\pm 10^{\circ}$	$\pm 5^{\circ}$
Axial Range	15m	10m
Measurement Accuracy	$\pm (0.002\theta + 0.1 + 0.05L)''$	$\pm (0.002\theta + 0.05 + 0.05L)''$
	θ is show value(Unit: second of arc); L is Measurement(Unit: m)	
Measurement Resolution	$0.1''$	$0.05''$

● 平面度测量 Flatness Measurement

MJS5430 平面度附件:

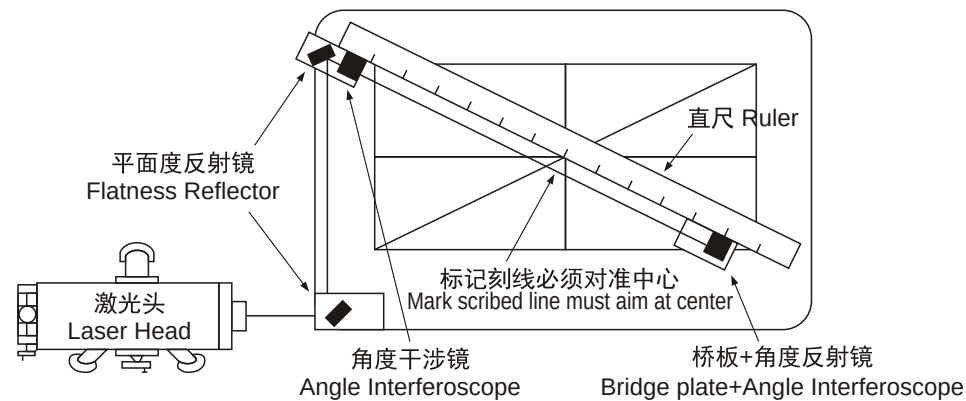
Flatness Accessories

平面反射镜

Flatness Reflector

桥板 (50、100、150)

Bridge Plate



型 号	MJS5C		
测量范围	±1mm		
轴向范围	15m		
测量精度	$\pm(0.005D+0.03M^2) \mu m$ D: 平面度评定值(μm), M: 被测平面对角线长度(m)		
测量分辨率	桥板跨度50 0.03 μm	桥板跨度100 0.05 μm	桥板跨度150 0.08 μm
评定软件	MJS5620 平面度评定软件		

Order No.	MJS5C		
Mesurement Range	±1mm		
Axial direction Range	15m		
Measurement Accuracy	$\pm(0.005D+0.03M^2) \mu m$ D: Flatness evaluation value(μm), M: the measured length of Flat diagonal (m)		
Measurement Eesolution Ratio	Bridge plate span 50 0.03 μm	Bridge plate span 100 0.05 μm	Bridge plate span 150 0.08 μm
Evaluation Software	MJS5620 flatness evaluation software		

● 直线度测量

MJS5440短直线度干涉镜及反射镜:

Short straight line interferoscope and reflector

MJS5441长直线度干涉镜及反射镜:

Long straight line interferoscope and reflector

MJS5442 直线度测量安装附件:

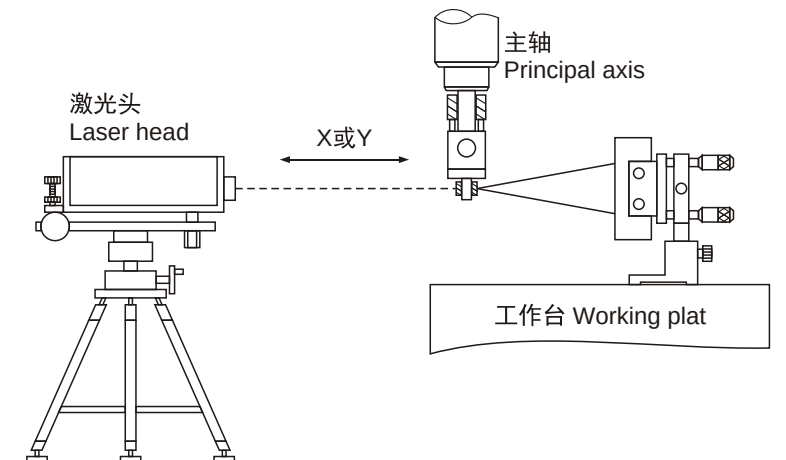
Straight line measurement assemble accessories



直线度干涉镜及反射镜:
Straight line interferoscope and reflector



直线度测量安装附件:
Straight line measurement assemble accessories

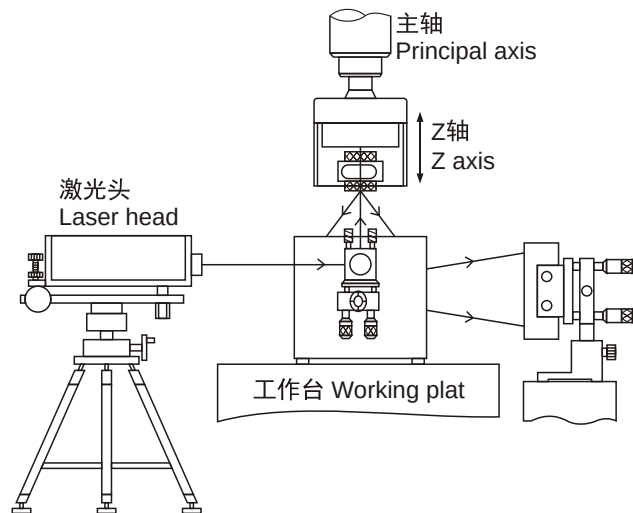


测量附件	MJS5440	MJS5441
测量范围	1.5mm	1.5mm
轴向范围	0.1~3m	1~12m
测量精度	$\pm 0.15M^2 \pm 0.75 \pm 3.5\%D \mu m$ M: 光学件移动距离(m), D: 直线度评定值(μm)	$\pm 0.015M^2 \pm 3.8 \pm 5\%D \mu m$
测量分辨率	0.75 μm	3.8 μm
评定软件	MJS5630 直线度评定软件	

Measurement Accessories	MJS5440	MJS5441
Mesurement Range	1.5mm	1.5mm
Axial direction Range	0.1~3m	1~12m
Measurement Accuracy	$\pm 0.15M^2 \pm 0.75 \pm 3.5\%D \mu m$ M: Optical moved distance(m), D: Straightness evaluation value(μm)	$\pm 0.015M^2 \pm 3.8 \pm 5\%D \mu m$
Measurement Eesolution Ratio	0.75 μm	3.8 μm
Evaluation Software	MJS5630 Straightness evaluation software	

● 垂直度测量: Verticality measurement

MJS5450 垂直度附件: Verticality Accessories
光学直角器及支架: Optical right angle and holder



测量附件	MJS5440	MJS5441
轴向范围	0.1~3m	1~12m
测量精度	$\pm 1 \pm 0.1M \pm 0.01 \theta$ 角秒	$\pm 1 \pm 0.01M \pm 0.03 \theta$ 角秒
	M: 测量距离(m), θ : 垂直度评定值(角秒)	
测量分辨率	0.75 μ m	3.8 μ m
评定软件	MJS5640 垂直度评定软件	

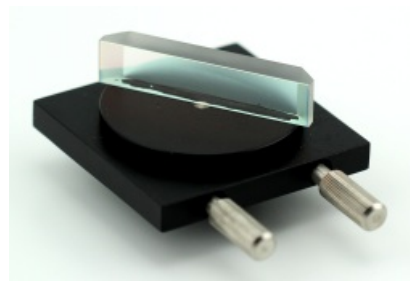
Measurement Accessories	MJS5440	MJS5441
Axial Direction Range	0.1~3m	1~12m
Measurement Accuracy	$\pm 1 \pm 0.1M \pm 0.01 \theta$ second of arc	$\pm 1 \pm 0.01M \pm 0.03 \theta$ second of arc
	M: Measurement distance(m), θ : verticality evaluation value(second of arc)	
Measurement Resolution Ratio	0.75 μ m	3.8 μ m
Evaluation Software	MJS5640 verticality evaluation software	

其他附件 Other Accessories

90° 转向反射镜:
90° Steering mirror



45° 斜床身测量附件:
Slant bed measurement accessories



测试与质保

Testing and quality assurance

本公司拥有高精度的碘饱和吸收基准激光器, 对每台仪器进行拍频校准, 保证系统精度, 仪器主要技术指标达到国际先进水平。公司拥有20米长导轨、高低温交变湿热箱、电磁兼容、振动试验台等多种装备, 每台仪器都经过严格的测试和试验, 确保仪器的可靠性, 我们自动将产品的质保期延长到三年。

The company has high precision of iodine saturated absorption benchmark laser to beat each instrument calibration and to guarantee the system accuracy. Instruments and the main technical index has reached the international advanced level. The company has 20 meters long rail, high and low temperature alternating hot and humid boxes, vibration test stand and other equipment, etc. Each instrument after strict test and trial to ensure the reliability. The product warranty automatically extend to three years.



产品与碘饱和吸收基准激光器拍频校准
Products beat frequency calibration with iodine saturated absorption benchmark laser