

TRISUN[®] 三昇

TRISUN PARTS MANUFACTURE



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High Efficient, Clean and Green

History



- 1998 Establish Wenzhou Trisun Seal Manufacture Co., Ltd.
- 1999 Pass ISO9001:2000 Certificate
- 2002 Establish Shanghai Trisun Parts Manufacture Co., Ltd.
- 2003 Set up Guangzhou Sales Branch
- 2004 Pass TS14001:2004 Environment System Certificate
- 2005 Establish Shanghai Songjiang Plant and equip with the global famous Company
- 2006 Develop and manufacture the metal bellows and cartridge seals
- 2008 Pass TS16949:2009 Certificate

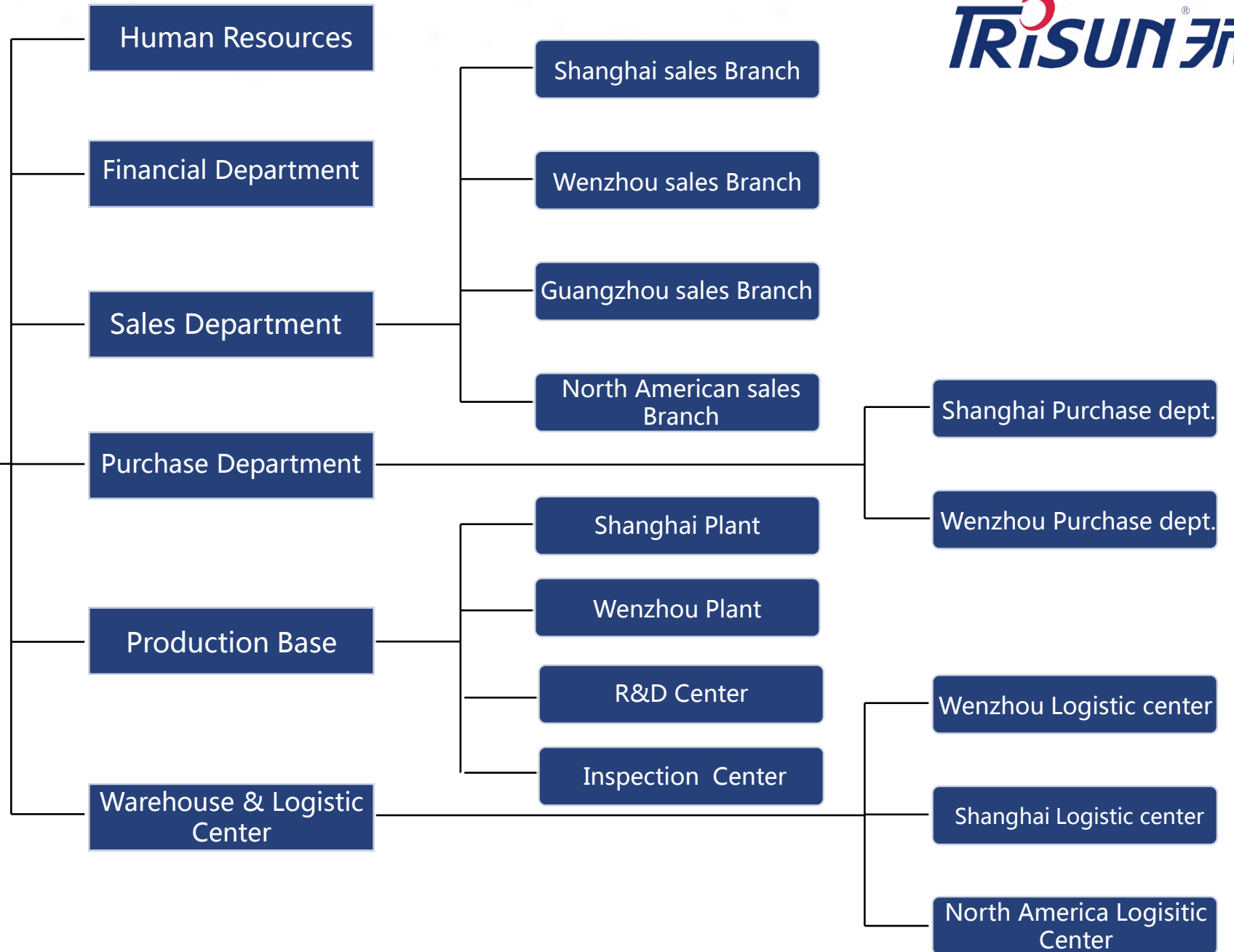


- 2009 Develop the high technology product — dry gas seals
- 2010 Manufacture high-quality PPS impeller, and relocate Sales Headquarters to Lujiazui Financial Center
- 2011 The production ability of Wenzhou plant exceeded 1 million sets per month and Shanghai plant moved to the new building
- 2013 Pass FDA and WRAS Certificates, Establish North American Sales & Logistics Center
- 2014 Pass API Certificate for cartridge seals, and set up Shanghai R&D and Logistics Center
- 2016 Wenzhou new production building is completed
- 2017 Build E-commerce sales platform
- 2019 Develop coating seal ring and shaft

Structure



Company Board



Network



Shanghai Sales Headquarters



Wenzhou Sales branch



North America Sales branch



Guangzhou Sales branch



Shanghai Trisun Production Base: 10000m² and 36 employees

Wenzhou Trisun Production Base: 30000m² and 160 employee



Products

TRISUN 天



Metal Bellows & Cartridge Seal



Thermosiphon Vessel



Dry Gas seal



Single-Spring Mechanical seal



Cooling Pump Seal & Impellers









pump sleeve

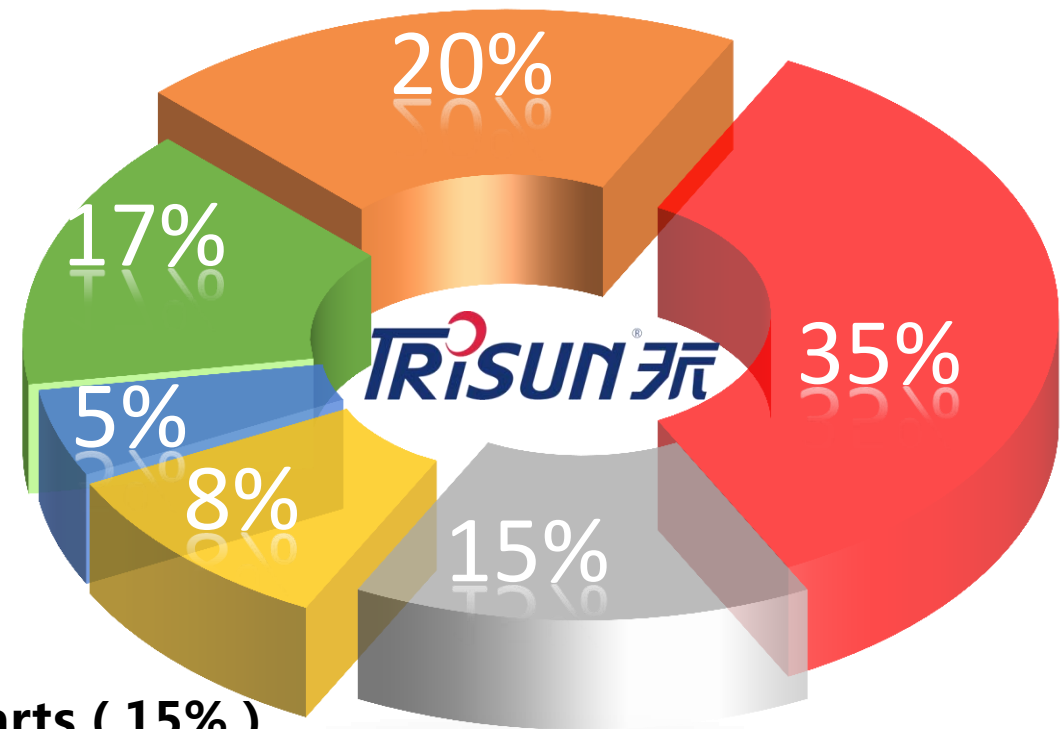


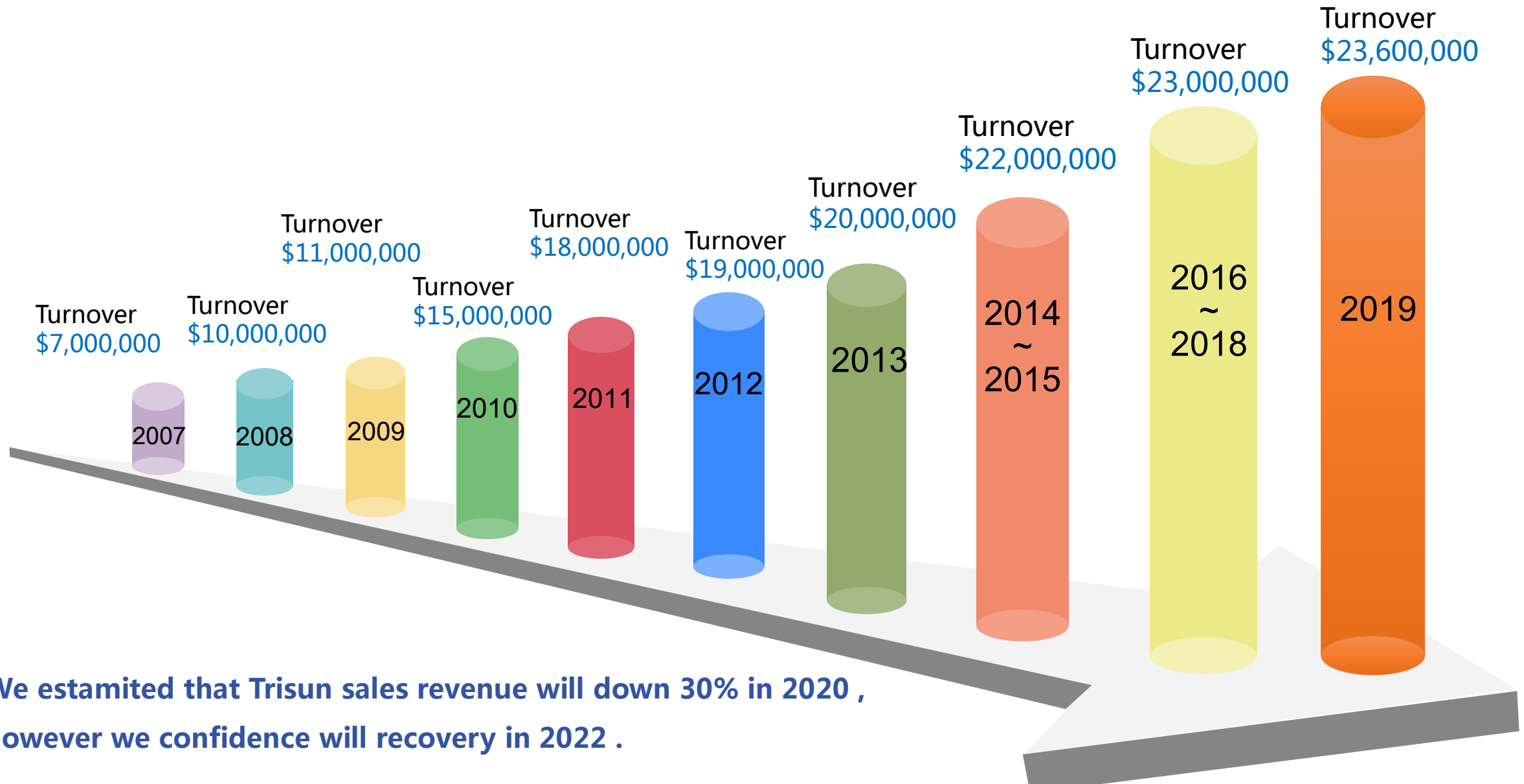
A/C Compressor Seal & Valve



Testing Equipment

-  Single-Spring Mechanical seals(35%)
-  Metal Bellow seal 、 Cartridge Seal & vessel tank、 Dry Gas Seal (20%)
-  Auto Cooling Pump Seal (17%)
-  A/C Compressor Seal & Valve (8%)
-  Impeller and Nozzel(5%)
-  Test machine,Lapping machine and other parts (15%)





- Annual Turnover : \$ 23,600,000

Total 236 employees
20 R&D personnel
15 Quality Checkers

4 Process Engineers
15 Salesmen
5 Purchasers

162 Workers
5 Financial Staff
10 administration Staff

Mechanical seals : 10,000,000 pcs/Year
Impellers : 2,000,000 Pcs/Year
Control Valves : 300,000 Pcs/Year

Metal Bellows : 24,000 pcs/Year
Cartridge Seals : 6,000 pcs/Year
Thermosiphon Vessels : 5,000 pcs/Year





ISO9001



IS16949



ISO14001



Test Report



Products

TÜVRheinland®
Precisely Right.

Test Report No.: 0244219513a 001 Page 1 of 6

Client: Shanghai Trisun Parts Manufacture Co.,Ltd
Room 3005-06, Sino-Life Tower, No.707 Zhangyang Rd Pudong Dist.Shanghai.
China.

Buyer's name: n.a.

Manufacturer's name: n.a.

Test item(s): Resin Impregnated Carbon Graphite

Identification / Model No(s): M-106(MC)

Sample Receiving date: 2020-02-28

Testing Period: 2020-02-28 to 2020-03-06

Test specification: **Test conclusion:**

Selected test(s) by client: PASS

Specific Release of Metals

Other information: **Sample Photo**
Selected test condition by client: (For detailed sample picture please refer to last page)

For and on behalf of TÜV Rheinland (Shanghai) Co., Ltd.

Sven Posselt
Date: 2020-03-09 Name / Position: Sven Posselt / Technical Head

Test result is drawn according to the kind and extent of tests performed.
This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be reproduced or extracted. This test report does not entitle to carry any safety mark on this or similar products.

TÜV Rheinland (Shanghai) Co., Ltd. Shanghai TÜV Rheinland Building, No. 177, Lane 777, West Guangzhong Road, Shanghai 200072, P.R. China
Tel.: +86 21 6108 1188 Fax: +86 21 6108 1099 Mail: info@shg.chn.tuv.com Web: www.tuv.com

TUV EU1935

报告编号: TS19040490 **日期:** 2019-04-16 **第 1 页 / 共 11 页**

检测报告

委托方	温州市天成密封件制造有限公司
地址	浙江省温州市瓯海区三溪工业区康宏西路 29 号
样品名称	石墨材料
型号	/
材质/颜色	Carbon/black
其他信息	Part No.: Sealing ring series; Item/LotNo.: MK
样品接收日期	2019-04-10
测试周期	2019-04-10~ 2019-04-16
测试要求	根据欧盟法规(CE) No 1907/2006 (即 REACH 法规) 所列明的 197 项高关注度物质(SVHC) 清单 (质量百分浓度不得超过 0.1%), 检测样品中 SVHC 含量。
测试方法	CIRS-TC-SVHC001, CIRS-TC-SVHC002, CIRS-TC-SVHC003, CIRS-TC-SVHC004, CIRS-TC-SVHC005, CIRS-TC-SVHC006
测试结果	委托方产品中检出的当前 REACH 法规第 57 条规定的 197 项高关注度物质质量百分浓度少于 0.1% (质量比)。

编制: 徐夏冰 **审核:** 李雪峰 **批准:** 陈峰

陈峰
授权签字人

杭州泰科检测技术有限公司
地址: 杭州市滨江区长安路 1180 号华业高科技产业园 4 号楼 1 层 邮编: 310052 热线电话: 4006-721-723
电话: +86 571-8720 8535 传真: +86 571-8990 0719 邮箱: test@ctc-group.com 网址: www.ctc-cl.com

REACH Certification

Report No.: TS19040494 **Date:** 2019-04-16 **Page 1/3**

Test Report

Applicant	Trisun Seal Manufacture Co., Ltd.
Address	No.29, Kanghong West Road, Sanxi Ind Zone, Ouhai, Wenzhou, Zhejiang
Sample Name	Nitrile rubber
Type/Model	/
Material/Colour	NBR/black
Other Info.	Part No.: Seal bellows and static ring series; Item/LotNo.: N004EA
Sample Received Date	2019-04-10
Test Period	2019-04-10~ 2019-04-16
Test Requirement	According to the requirements of RoHS Directive 2011/65/EU (the European Parliament and the Council's Restriction on the use of certain Hazardous Substances in electrical and electronic equipment) and its amendment (EU) 2015/863.

Test Item(s)	Test Result(s)
Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (CrVI), Polybrominated biphenyl (PBBs), Polybrominated diphenyl ether (PBDEs), Butylbenzylphthalate (BBP), Di-(2-ethylhexyl)-phthalate (DEHP), Dibutylphthalate (DBP), Diisobutyl phthalate (DIBP) Content	Pass

Complied by: Beta Xu **Inspected by:** Li Xuefeng **Authorized by:** Li Changhai

Beta Xu **Li Xuefeng** **Li Changhai**
Accredited Signatory

Hangzhou C&K Testing Technic Co., Ltd.
Add: 1/F No.4 Building, Huayu Hi-Tech Industrial Park, No.1180, Bin'an Road, Binjiang District, Hangzhou 310052, China
Hotline: 4006-721-723 Tel: +86 571-8720 6535 Fax: +86 571-8990 0719 E-mail: test@ctc-group.com Website: www.ctc-cl.com

ROSH Certification



Shanghai Sample Room



Wenzhou Sample Room



Shanghai Songjiang Office

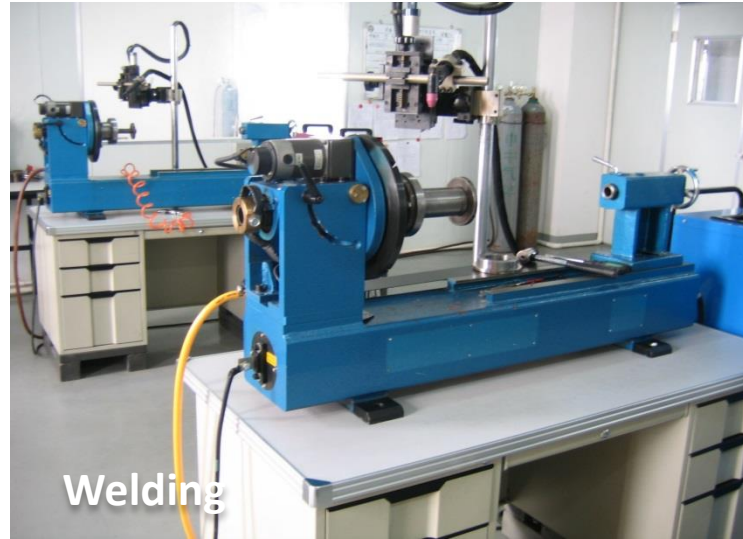


Shanghai Pudong Office





Welding



Welding



Milling



Machining



Drilling



CNC







Shanghai Assembly Center



Wenzhou Assembly Center



Warehouse

TRISUN 天







Dust Free Workshop



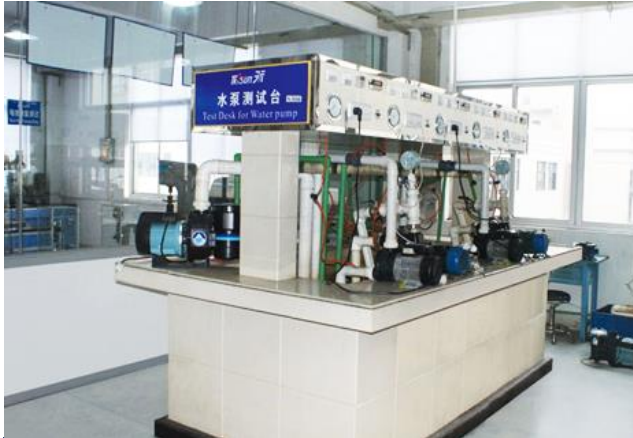
Automatic Retainer Healing



Automatic Leakage Testing

➤ Auto cooling pump seal,
dish-washing seal,
sanitary pump seal

Trisun assemble 7 million mechanical seals annually, We always aims to OEM market . In order to match the strict requirements of Food Manufacturing and Sanitary Industry, Our material also have FDA, NSF, WARS and TUV1935 certification. Trisun OEM standard seal will have 100% air static testing before shipment.



Seal Rotating Life Test Bench



Chemical pumps Rotating Life Test Bench



Auto-cooling pump testing system



Compressor Test Bench



Seal Static leakage testing system



Runout Detector



Auto Control Valve Detector



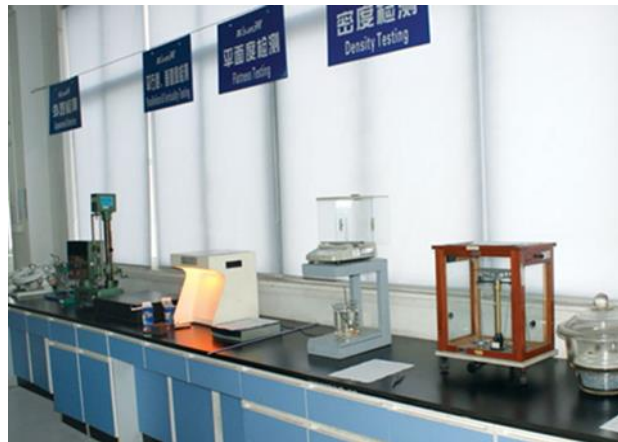
Precision Spring Testing



Sulfide Tester



Rubber Tensile Tester



Laboratory

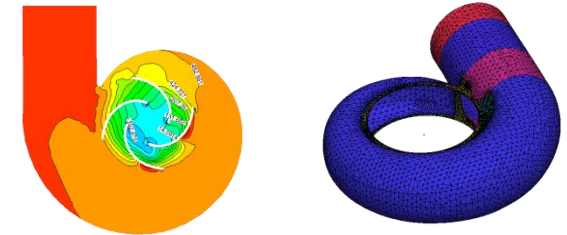
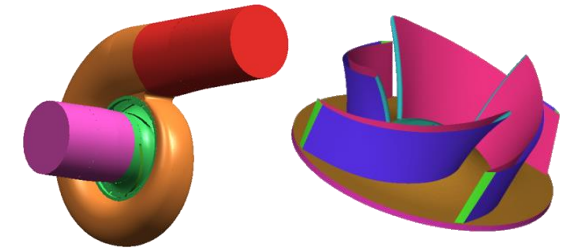


3D Testing&Design Instrument

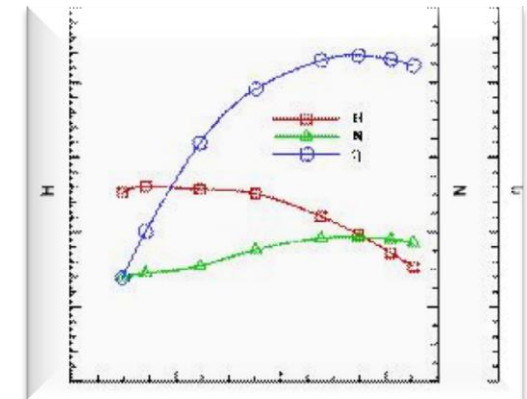
◆ Our R & D team members :

PhD supervisor:1 person , PhD: 3 persons, Senior engineer:2 persons,
5 years working experience engineer(fluid industry, polymer materials): 6 persons

- Impeller hydraulic model design of centrifugal pump, mixed-flow pump, axial flow pump and other special pump.
- Performance optimization of all types of turbine and pump
- Flow field numerical simulation and performance prediction of fluid machinery



- (National "South-to-North water diversion" project)
- Chemical axial pump' s numerical analyze and optimization
- (National Natural Science Foundation)
- Chemical axial pump's numerical simulation and performance and prediction (One domestic famous pump factory's project)
- The Research & develop of the centrifugal pump with inlet guide vane.
- Centrifugal pump' s cavitation performance prediction.



3D Printing applied in the tooling design and new products development

- We use 3D printing technology in industrial product design and development process (such as pump housing, thermostat, pulley, impeller, etc.). Designers can use this method to quickly convert the computer graphics to physical model in order to improve the accuracy of design and shorten the product development cycle.



Nozzel Prototype by 3D printing



Final Products by Tooling

State-of-the-art Technology

- Through computer numerical simulation , we obtain accurate parameters of mechanical and thermodynamic properties to design outstanding, stable and reliable dry gas seals.

Advanced Processing Techniques

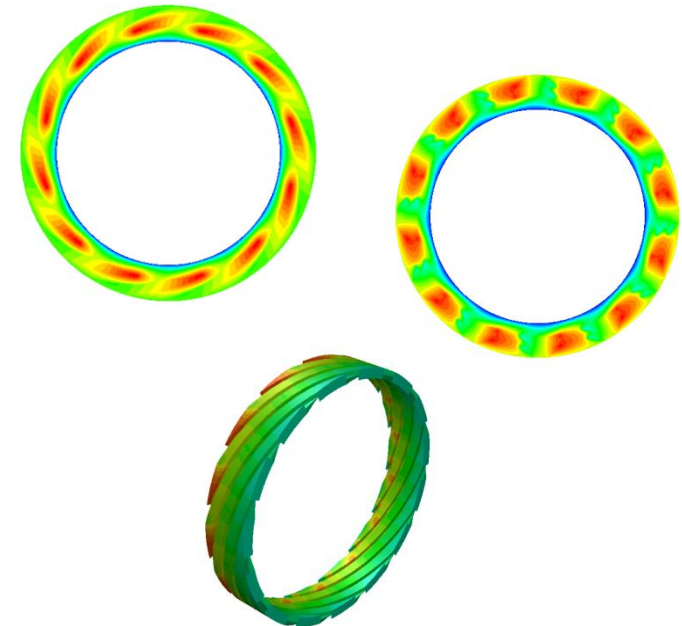
- The high-performance laser equipment can process all kinds of dynamic pressure grooves on the surfaces of the different material rings

Abundant Product Models

- The product range covers pump seals, compressor seals and agitator seals. Besides our standard product models, we can also provide special design according to customers requirements.

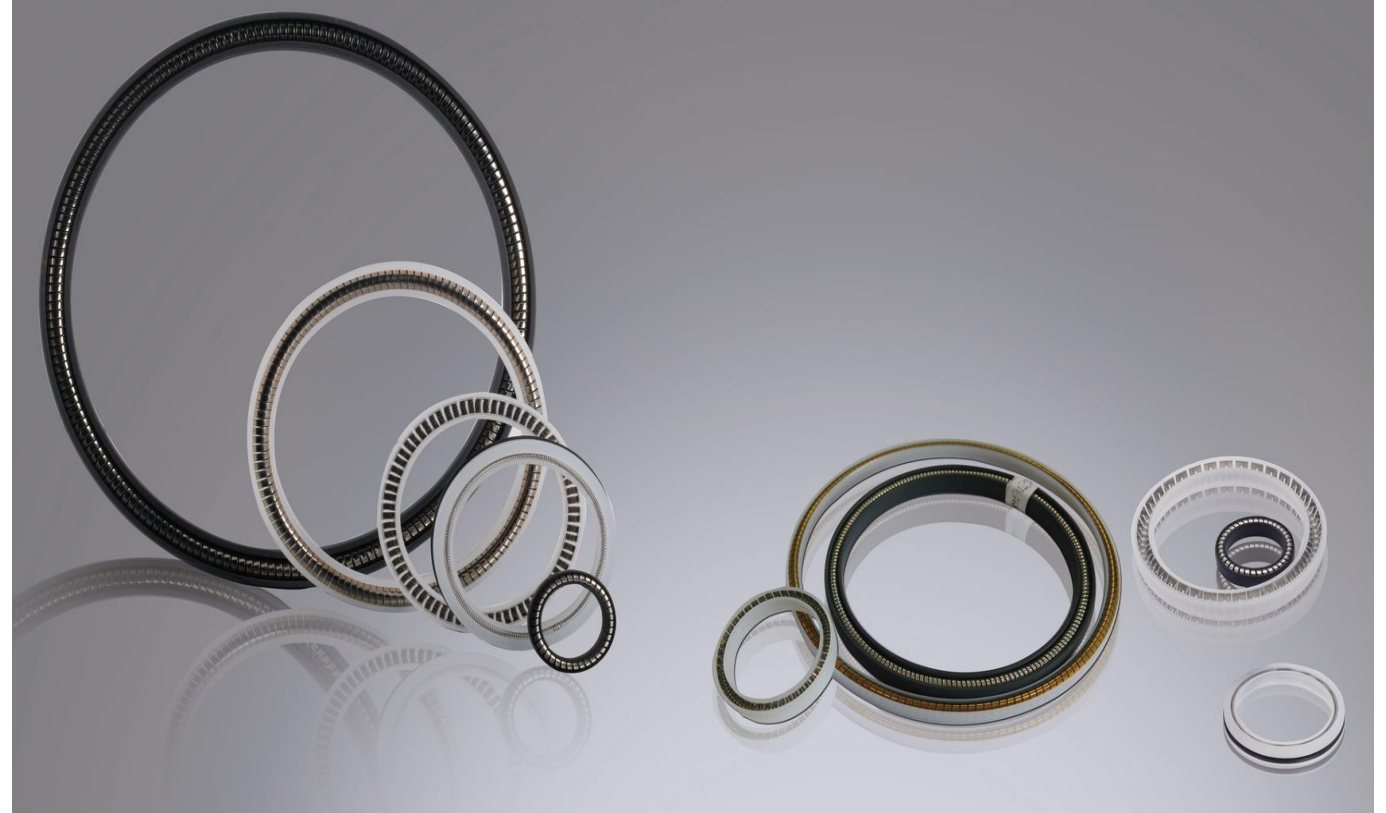
The First-class R&D Team

- R&D team is composed of Masters and PHD. Meanwhile , we have close cooperation with famous universities and institutions.





Dupont-Kalrez and FFKM

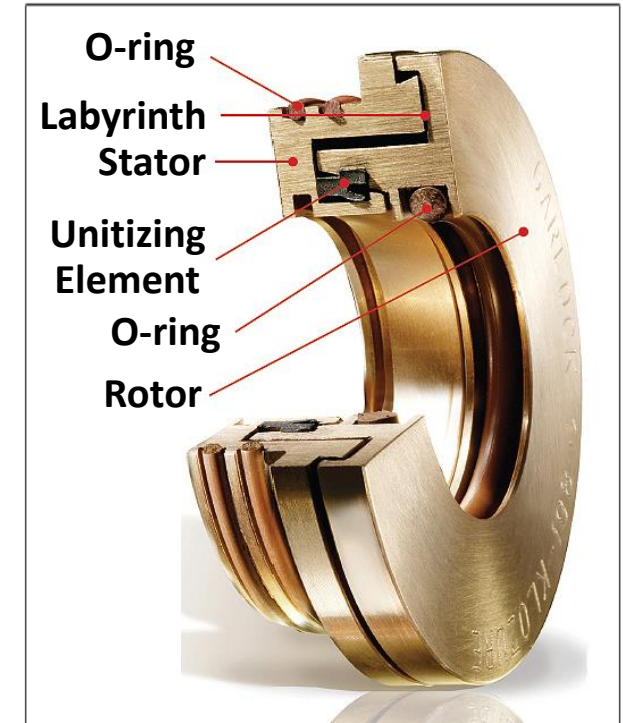


Spring energized seal

Bearing Isolator



Bearing Isolator ,also named Bearing Protector, It consists of a rotor and a stator, which are unitized by an O-ring. The two components interact to keep the pollutants out of the bearing housing and prevent the leakage of the lubricants .



Features of Bearing Isolator

- Non-contact , No wear to the shaft
- Zero energy consumption
- Block moisture enter the bearing housing when equipment
- Split design available
- Shaft speed up to 60m/s
- emperature range: -35 °C~204°C
- More than 40,000 hours lifetime

Trisun developed the coating technology for pump shaft and mechanical seal rings .

There are Aluminimu base , Chromium Trioxide (Cr_2O_3) base and Diamond base coatings

The coating thickness from 0.2mm to 1 mm .



Coating technology will efficiently improve pump life. These insulation coating-material will down the pump temperature when pump under the dry run or high-speed operation .Pump will also enhance the wear and corrosion resitant by coating technology.

Carbon



Germany-SGL



UK-MORGAN



Germany Schunk



American METCAR

Rubber



Japan DAIKIN



The miracles of science™

American DUPONT



American Dow



Japan Zeonex

American
ROYALENE

Uniroyal Chemical Inc

SIC



SAINT- GOBAIN

PTFE



Italy-MTU

Spring



Japan GMB

Other



Germany GPM



Japan-TORAY



Solution Platform for Engineering Plastics

Japan Polyplastics

Automotive



河南西峡汽车水泵股份有限公司



一汽富奥汽车零部件有限公司



上海乾通汽车附件有限公司



洛拖集团（中国一拖集团有限公司）



韩国 KIA(起亚)
OEM配套



伊朗标致
OEM 配套



南非大众



河北宏业机械股份



美国三电



中国上海三电



广州动源压缩机



汉钟精机股份



北京京威



上海甘森利汽车配件



意大利富士豪



美国四季

Chemical Industry



巴基斯坦
国家炼油厂



PETRO-CANADA
加拿大石油公司



Scomi Group BHD



ICL FERTILIZERS
GROUP



Pump



GMB



KOSHIN
Japan KOSHIN



KUBOTA
Corporation



EBARA



Flowserve
Corporation



Procon pumps



ANDRITZ
TECHNOLOGIES



Germany SIHI Pump



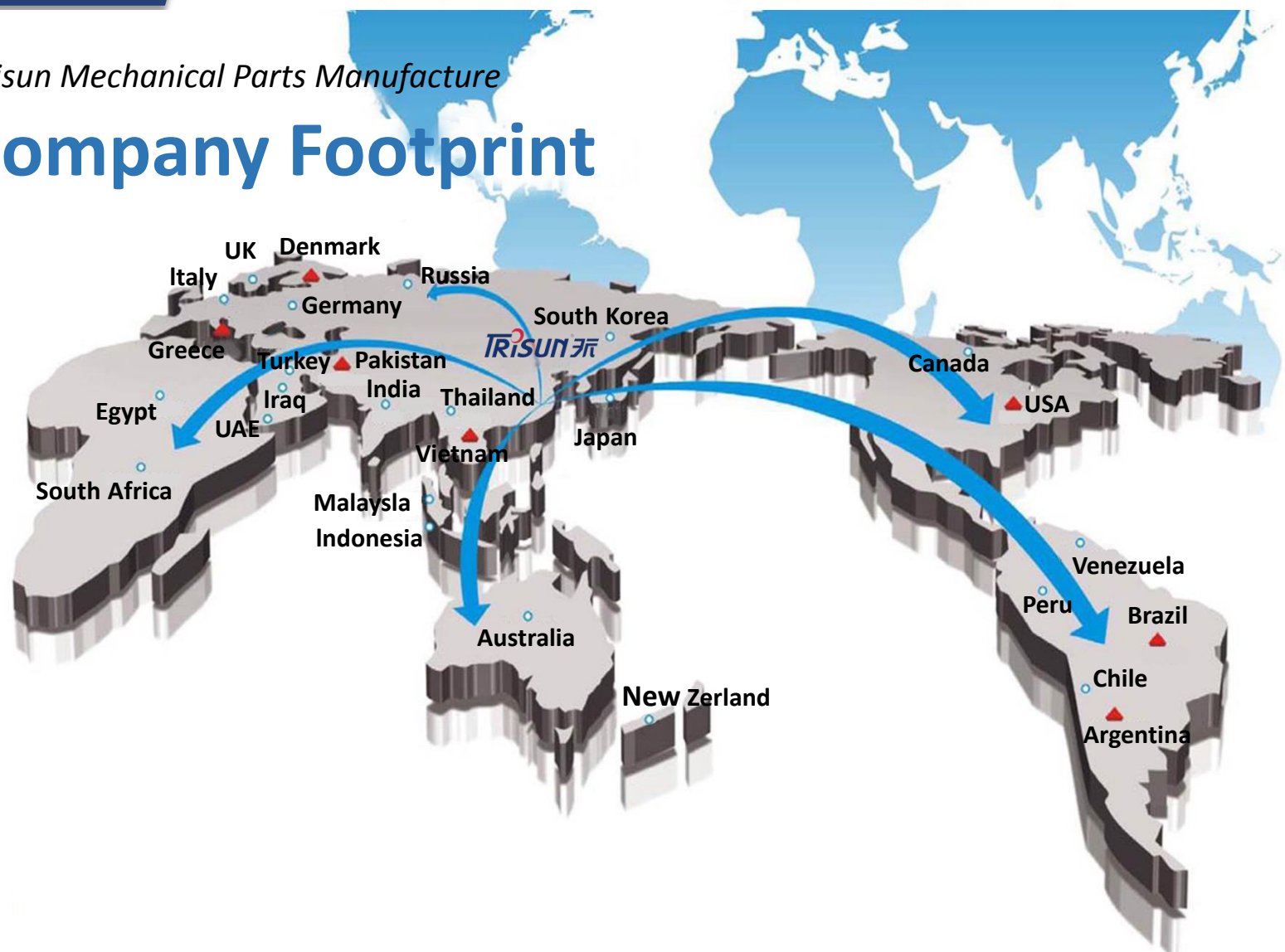
MITSUBISHI
ELECTRIC



NETZSCH Pump

Trisun Mechanical Parts Manufacture

Company Footprint





Brazil-AUTOMEC



Germany-ACHEMA



Guang Zhou-Canton Fair



Beijing-ACHEMA



USA-WEFTEC



Italy-EIMA show



Shanghai - CIAPE



Turkey - ISK-SODEX



Add: No 3005-07 ,Sino-Life Tower,No 707 Zhangyang
Rd,Pudong Shanghai China 20020

Tel: 0086-21-58355541 58353145 50102677

Fax:0086-21-5858353141

<http://www.trisunltd.com>

