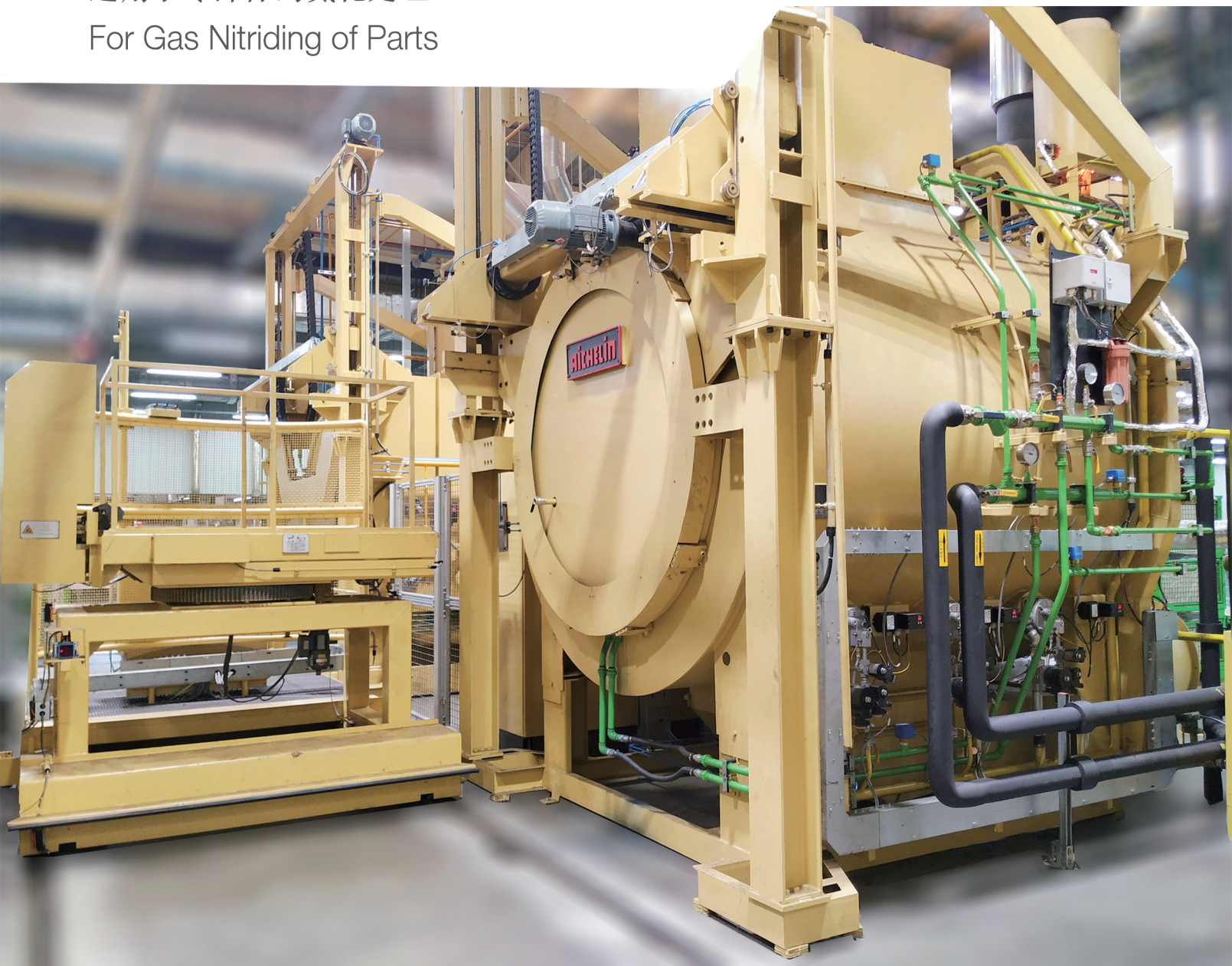


箱式气体氮化炉热处理生产线

Gas Nitriding Chamber Retort Furnace Plants

适用于零部件的氮化处理
For Gas Nitriding of Parts



Reliability at Work

爱协林热处理系统（北京）有限公司
AICHELIN Heat Treatment Systems (Beijing) Co., LTD.

箱式气体氮化炉生产线

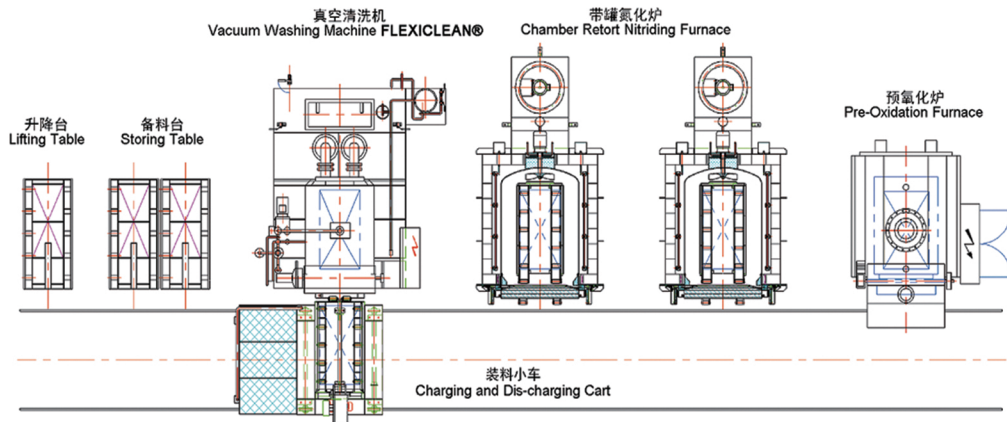
Gas Nitriding Chamber Retort Furnace Plants

生产线概述 INTRODUCTION

爱协林箱式氮化炉生产线，一般由箱式带罐氮化炉、真空清洗机、预氧化炉、进出料车及备料台等设备共同组成。采用 $\text{NH}_3+\text{N}_2+\text{CO}_2$ 氮基气氛，使用氢分析仪和PE系列氮势控制仪进行氮势控制，并配备渗氮专家系统软件，全部过程由计算机控制，工艺参数精确，自动化程度高，操作环境好。适用于对齿轮、工模具等零件的氮化后氧化及氮碳共渗处理。零件外观呈银灰色，变形小，质量稳定。

ACHELIN chamber nitriding furnace production line is generally composed of chamber retort nitriding furnace, vacuum washing machine, pre-oxidation furnace, transferring car and storage table, etc. Using $\text{NH}_3+\text{N}_2+\text{CO}_2$ nitrogen-based atmosphere, hydrogen analyzer and PE series nitrogen potential controller, and equipped with nitriding expert system software. The whole process can be controlled by computer with accurate process parameters, high automation, safe and tidy operating environment. This production line is applied for post-nitriding oxidation and nitrocarburizing treatment of gears, tools and molds and other parts. The appearance of the heated parts is silver-gray, with small deformation and stable quality.

气体氮化炉生产线布置图示例 Layout of Chamber Retort Nitriding Furnace Plant



■ 带罐氮化炉 Chamber Retort Nitriding Furnace

带罐氮化炉配有 NH_3 +裂解 NH_3 且通过氢探头、质量流量计和PE控制系统软件，精准控制氮势值，并配有工艺氮气和安全氮气，既保证良好的工件外观质量，又保证设备安全运行。工件氮化后可获得具有高硬度、高耐磨性和抗咬合性能的银灰色光亮表面，外观质量好，硬度均匀，变形小且规律性强。

Chamber retort nitriding furnace is equipped with NH_3 + cracking NH_3 . Through the hydrogen probe, mass flowmeter and PE control system software to control the nitrogen potential value precisely. Process nitrogen and safety nitrogen are also equipped, which not only ensures the good appearance quality of the workpiece, but also ensures the safe operation of the equipment. After the nitriding, a silver-gray bright surface with high hardness, high wear resistance and anti-seizure performance can be obtained, with good appearance quality, uniform hardness, small deformation, and strong regularity.

■ 软氮化炉 Nitrocarburizing Furnace

配有供气系统，工艺 $\text{NH}_3+\text{N}_2+\text{CO}_2$ 氮基气氛以及安全氮气均由电磁阀和流量计控制。氢分析仪、PE系列氮势控制仪和渗氮专家软件系统可测定、控制、计算并显示炉内氮势，以实现氮化过程的精确控制。

Equipped with a gas supply system, the process $\text{NH}_3+\text{N}_2+\text{CO}_2$ nitrogen-based atmosphere and safety nitrogen are controlled by solenoid valves and flow meters. The hydrogen analyzer, PE series nitrogen potential controller and nitriding expert software system can measure, control, calculate and display the nitrogen potential in the furnace to achieve precise control of the nitriding process.



■ **真空清洗机 Vacuum Washing Machine**

全部清洗过程可自动进行。清洗液在真空环境下自然沸腾产生大量气泡，增强对各种油污的清洗能力。清洗结束后真空干燥，进一步净化工件表面。对于带有孔穴沟槽的零件，清洗和干燥效果尤佳。

All cleaning processes can be carried out automatically. The cleaning liquid boils naturally in a vacuum environment to generate many bubbles, which enhances the cleaning ability. After cleaning, vacuum drying is performed to further purify the surface of the workpiece. Cleaning and drying are particularly effective on parts with cavity grooves.

■ **预氧化炉 Pre-Oxidation Furnace**

工件在预氧化炉中经过预氧化后，渗层均匀性好，渗层深度增加。

After the workpiece is pre-oxidized, the uniformity of the carburized layer is good, and the depth of the carburized layer is increased.

■ **控制系统 Control System**

通过计算机进行全过程控制，并在显示屏上显示工序过程、工艺参数、有强大的软件支持，可进行质量管理、故障诊断、数据存储、工艺存储等。

The whole process is controlled by computer, and the process and process parameters are displayed on the screen. With strong software support, it can carry out quality management, fault diagnosis, data, and process record, etc.

技术规格与型号 TECHNICAL SPECIFICATION AND TYPES

规格型号 Type	工作区尺寸 Size of charges (L*W*H)	最大装载量 Gross Charge
2	900*550*500mm	350kg
3	1100*600*650mm	650kg
4 / 1	1300*700*650mm	1000kg
4 / 2	1300*700*850mm	1000kg
5 / 1	1500*900*650mm	1500kg
5 / 2	1500*900*850mm	1500kg

其他特殊型号可根据客户要求定制 Special Size Customized



氮化后工件外观 Parts Nitrided



箱式氮化炉 Chamber Nitriding Furnace

国际品牌，百年企业 ABOUT AICHELIN

150+年金属材料热处理经验，与客户一起成长的爱协林，是一家有生命力的企业。

With 150+ years of experience in heat treatment of metal materials, AICHELIN, which grows with customers, shows surprising vigor and vitality.

爱协林 (AICHELIN)，创立于1868年，总部位于奥地利维也纳附近。是一家专注于热处理技术与工艺发展创新，经过150+年金属材料热处理经验积累，已成为当下国际知名热处理装备制造供应商。旗下的10家子公司遍布于欧洲、亚洲及美洲，聚焦全球3大业务单元：工业炉热处理技术、烧嘴技术及全球服务，匠心为全球客户打造高品质产品，共享爱协林全球先进技术及供应链资源。

作为爱协林集团在华子公司：爱协林热处理系统（北京）有限公司于2005年成立。在前身爱协林工业炉工程（北京）有限公司（成立于1993年）基础上，全面主导工业炉在中国的研发制造、安装调试及售后服务等，并逐步形成定制化研发制造独特风格，已为国内外客户提供低能耗、清洁化、智能化的柔性热处理装备1800+台套，这些设备广泛应用于汽车、齿轮、轴承、机械、铁路、航空、航天、船舶、石油等行业。

AICHELIN, founded in 1868, with headquarter near Vienna, Austria. It is a company focusing on the development and innovation of heat treatment technology and processes. After 150+ years of experience in heat treatment of metal materials, it has become an internationally renowned heat treatment system equipment supplier. There are 10 subsidiaries located in Europe, Asia, and America, covering 3 major global business units: industrial furnace solutions, combustion technology and global services. AICHELIN dedicated to providing high-quality products to global customers and sharing its global advanced technologies and supply chain resources.

As a subsidiary of AICHELIN Group in China: AICHELIN Heat Treatment Systems (Beijing) Co., Ltd. was established in 2005. Based on its predecessor, AICHELIN Industrial Furnace Engineering Beijing Co., Ltd. (founded in 1993), it has fully dominated the R&D, manufacturing, installation, commissioning, and after-sales service of industrial furnaces in China and has gradually formed a unique style of customized R&D and manufacturing. 1800+ set(s) of low-energy, clean and intelligent flexible heat treatment equipment are provided to local and abroad customers. They are widely used in automotive, gears, bearings, machinery, railroad, aviation, aerospace, shipping, petroleum and other industries.



AICHELIN Ges.m.b.H
Fabriksgasse 3
A-2340 Mödling, Austria
Phone: +43(2236)23 646-0
Telefax: +43(2236)22 229
E-mail: marketing@aichelin.com
www.aichelin.com

爱协林热处理系统（北京）有限公司

地址：北京市昌平区北七家镇未来科学城南区未来中心G座8层
传真：010-5081 5997
总机：010-5081 5998
销售热线：010-5081 5959
邮箱：Sales.China@aichelin.com

www.aichelin.com.cn