



JIANYE

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专注高精度 面料检测

FOCUS ON HIGH PRECISION
FABRIC INSPECTION



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新一代智能验布机

INTELLIGENT FABRIC INSPECTION MACHINE

第一台基于自主研发AI算法，具备自学习能力的新一代智能验布机

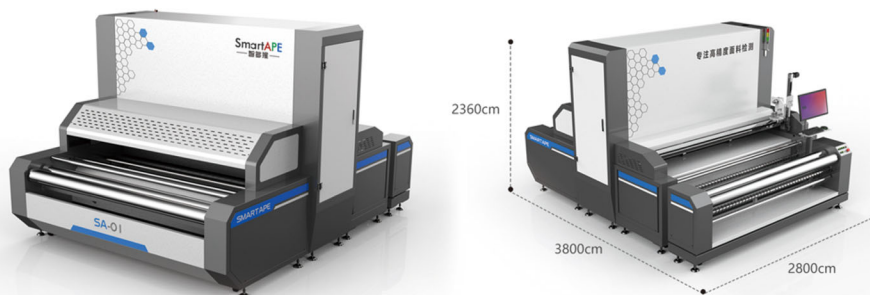
The first Artificial Intelligence Fabric Inspection Machine with self-learning ability ,
based on self-developed AI algorithm.

型号：SA-01 服装厂机型（卷对卷）

Model: SA-01 Garment factory model (Rolling to Rolling)

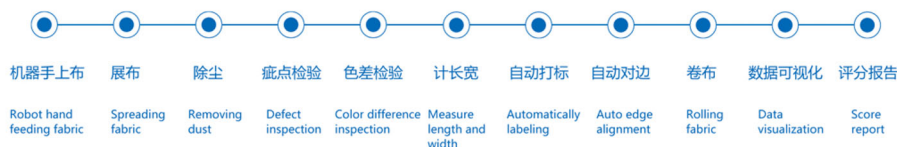
另有服装厂机型SA-02（卷对松） 染厂机型SA-03（松对卷）

Garment factory model SA-02 (Rolling to Relaxing) Dyeing factory model SA-03 (Relaxing to Rolling)



适用于针织、梭织单色布

Suitable for knit, woven monochrome fabric



可检测疵点 DETECTABLE DEFECT

破洞、污渍、断纱、折痕、结头、粗纱、漏针、烂针、飞花、暗花、色纱等等。

Hole, Stain, Broken Yarn, Crease mark, Knot, Coarse Yarn, Dropping stitch, Broken stitch, Flying, Shadow, Color difference etc.

色差：布边中边差、布头中尾差、布匹与匹差

Color difference: Color difference in left & right edge and middle (lateral chromatic aberration), color difference in beginning and middle and the end, color difference in different roll fabric from the same dyeing tank.



视觉采集室
Visual acquisition area



贴标装置
操控台
Labeling device
Control system

分解图
Structure diagram



卷布进布区
Rolling fabric input area

机器人自动穿布装置
无张力吹风展平装置
吸尘装置

Robot hand automatically feeding fabric device
Tension-free blower spreading flattening fabric device
Dust sucking device



自动对边卷布收布区
称重装置

Auto edge alignment re-rolling fabric area
Weighing device

CORE ALGORITHM TECHNOLOGY

核心算法技术



- 1 基于团队主导制定的ISO/MPEG CDVA国际标准技术，自主研发布面疵点高精度检测算法。

Based on ISO / MPEG CDVA International standard technology which was led by BOYUNVISION in 2015, we successfully developed a high-precision detection algorithm for fabric defects.

- 2 使用未来最具潜力、难度更大的面阵检测法，可实现折痕等纵深性疵点及色差的检测能力

We have adopted more difficult and potential detection methods. Therefore, we have better detection effect for detection of chromatic aberration and some defects with depth characteristics. Such as creases.

- 3 具备AI算法自主学习技术，在复杂面料环境中，机器能自主思考，越学习越智能

With AI algorithm self-learning technology and the accumulation of data, our machine can think independently and become more and more intelligent in the future.

- 4 面对百亿级别的图像特征提取、处理，可实现毫秒级近乎实时响应

Our technology can extract and analyze image features at the level of 10 billion in milliseconds.

- 1 高效率，降人工
HIGH EFFICIENCY, REDUCE LABOR

人工验布平均速度：15-20M/MIN；智能验布机平均验布速度：60M/MIN，可替代2-5个传统验布工，为企业每年节约上百万费用

Replace 2-5 traditional fabric inspection workers, saving millions of cost for the company every year.

The average speed of manual fabric inspection: 15-20m / min; the average speed of intelligent fabric inspection: 60m/min.

- 3 提升产能稳定性
IMPROVE THE STABILITY OF PRODUCTION CAPACITY

24小时不间断运行，降低对人的依赖程度，防止因社会疫情、人员请假、离职引起的产能波动问题

Uninterrupted operation in 24 hours, reducing the dependence on people, preventing production capacity fluctuations caused by social epidemics, staff leave, and departures.

- 2 高识别率，减少赔偿
HIGH RECOGNITION RATE, REDUCE COMPENSATION

人工平均检出率：70%，最高识别精度：0.1MM；智能验布机平均检出率：90%以上，最高识别精度：0.01MM，可实现对面料全检，检测率稳定，且高于人工，可减少因抽检、检测不准导致的后续客户赔偿问题

Complete fabric can be inspected, the inspection rate is stable, and it is higher than manual, which can reduce the customer compensation problems caused by random inspection and inaccurate inspection. The average manual inspection rate: 70%, the highest recognition accuracy: 0.1mm; the average inspection rate of the intelligent fabric inspection machine: more than 90%, the highest recognition accuracy: 0.01mm.

- 4 信息化、数字化
INFORMATIZATION AND DIGITIZATION

疵点、布料数据信息化，云端存储，实时查看、便于传送；开放API接口与ERP、MES等系统及自动裁床、铺布机等自动化设备串联成纺织智能生产线，打造纺织智能工厂

Open API interface, connect with ERP, MES and other systems, can connect with automatic equipment such as automatic cutting machines and fabric spreader as well to form a textile intelligent production line to create a textile intelligent factory.

智能验布效益
BENEFIT OF INTELLIGENT
FABRIC INSPECTION

4 NEW ADVANTAGES

新一代智能验布机 - 4大“新”优势

1

可检测“色差”（专利）
CAN INSPECT “COLOR DIFFERENCE
INSPECTION” (NATIONAL PATENT).

实时色差检测，可检测布中边差、布头中尾差、布匹与匹差

Color difference real-time inspection, can inspect color difference in left & right edge and middle (lateral chromatic aberration), color difference in beginning and middle and the end, color difference in different roll fabric from the same dyeing tank.

3

无张力吹风展平、吸尘装置（专利）
TENSION-FREE BLOWER SPREADING FLATTENING
FABRIC DEVICE, DUST SUCKING DEVICE (NATIONAL PATENT).

不进行外力拉扯情况下，对轻微折痕、卷边、纬斜、布面杂物进行有效整理

Effectively sort out slight creases, edge curl, weft sekwing, and fabric surface sundries without external force pulling.

2

机器人自动穿布（专利）
ROBOT HAND AUTOMATICALLY FEEDING
FABRIC (NATIONAL PATENT).

省去70%的上料工作，每天可省2小时无效工作时长

Save 70% fabric feeding working, save 2 hours invalid working time daily.

4

4

布料前、后2米可检测
2 METERS OF THE BEGINNING AND END
OF THE FABRIC BOTH CAN BE DETECTED.

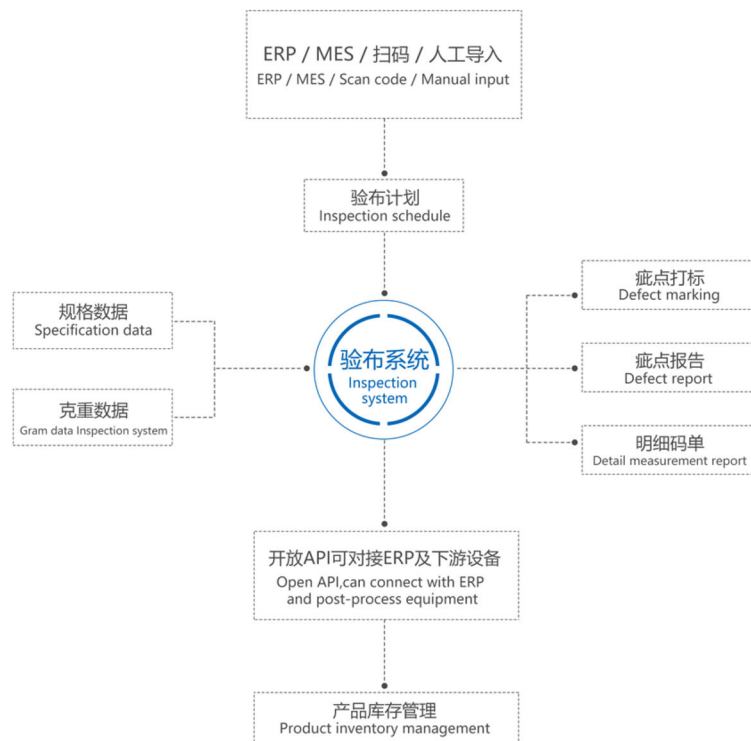
创新的机械设计及算法设计，保证布料的前、后2米均可检测

Innovative mechanical design and algorithm design ensure the complete roll of the fabric can be inspected.

SA-01 技术参数 Technical specification

疵点检出率 90% (肉眼可见疵点检出率达98%) Defect inspection rate: 90% (The inspection rate of eye visible defect is 98%)

检验精度 Detection precision:	最高可达0.3MM Max. 0.3mm	卷装直径 Fabric diameter:	≤600mm
检验速度 Inspection speed:	≤60M/MIN (不含打标时间) ≤60m/min (not include labeling time)	计长偏差 G.L. deviation value:	≤0.5%
疵点信息 Defect info.:	大小、位置、类别、图像 Size, location, type, image	电压&频率 Voltage & Frequency:	1PH 220V 50HZ
可检幅宽 Working width:	2100mm	功率 Power:	4Kw



验布报告详情页

面料检验总结									
检验日期	2023-10-27	检验时间	10:00	检验地点	三楼检验室	检验员	张三	审核员	李四
品名	纯棉T恤	规格	180/90	颜色	白色	重量	150g	长度	100cm
批次	20231027	数量	1000	检验数量	1000	合格率	98%	不合格数量	20
检验项目	外观	手感	尺寸	重量	长度	宽度	厚度	弹性	耐洗
检验结果	合格	合格	合格	合格	合格	合格	合格	合格	合格
备注	检验过程中发现少量瑕疵，不影响整体质量。								



OTHER FEATURES

其他功能特点

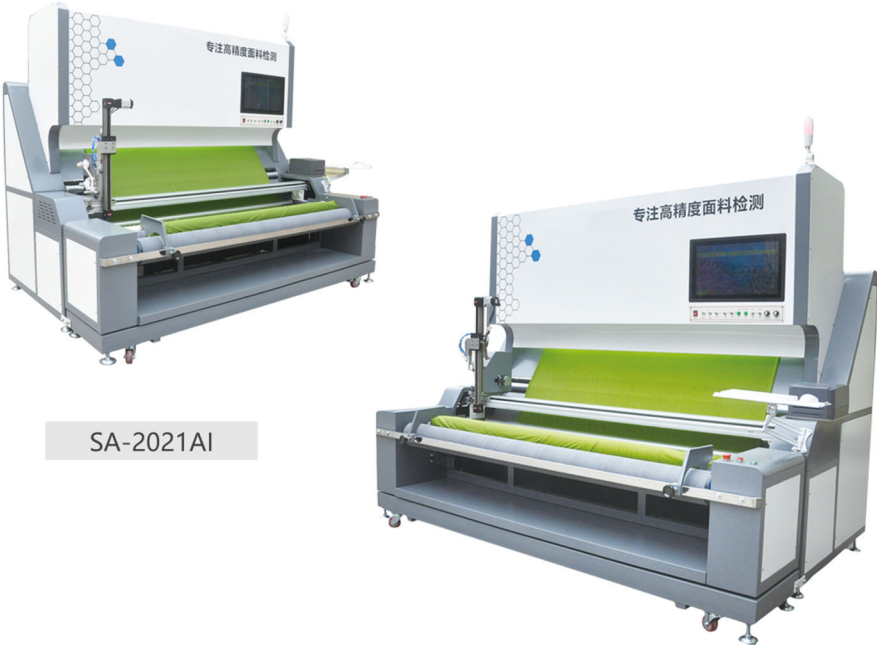
- 1** 采用多个高像素摄像头，全自动检验布面疵点，保证检验的连续性与准确性
Use multiple high-pixel cameras are used to automatically inspect the fabric defects, ensure the continuity and accuracy of the inspection.
- 2** 光亮度自调整：无需人工手动输入布料颜色、厚度，光亮度根据布料实际成像效果进行自调整，也避免了因光源老化导致的检测率下降问题
Self-adjustment of brightness: No need to manually enter the color and thickness of the fabric. The brightness will be automatically adjusted according to the actual imaging effect of the fabric, and the problem of inspection rate decline due to aging of the light source is avoided.
- 3** 遇疵点自动报警，可选“自动/半自动”检测模式，半自动模式需经人工复核，满足部分客户的定制化疵点检测需求
Automatic alarm when recognizing defects, optional "automatic / semi-automatic" inspection mode, the semi-automatic mode needs manual review, to meet the customized defect inspection demand.
- 4** 疵点标记方式：可选“疵点位置”或“疵点对应的布匹边缘位置”贴标，自动贴标，位置精准，满足多类客户需求
Defect labeling method: optional "defect location" or "fabric edge location corresponding to the defect" labeling, automatic labeling, accurate location, to meet the needs of different customers.
- 5** 专业验布报告：检验后，自动根据《美标四分制》评分，输出专业验布报告，也可根据客户进行个性化定制
Professional fabric inspection report: after inspection, it will automatically score according to the "American Standard Four-point System", output a professional fabric inspection report, which can also be customized according to customers requestment.
- 6** 信息云端存储及大数据分析：疵点、布匹、报告信息云端存储，随时调用，实时了解验布情况
Information cloud storage and big data analysis: defect and fabric information report cloud storage, invoke at any time, can check the fabric inspection info at real-time.
- 7** 整机采用原装进口控制电器：松下PLC、三菱变频等
The whole machine adopts original imported control electrical appliances: Japan Panasonic PLC, Japan Mitsubishi inverter, etc.

智能验布机

人工智能 赋能传统验布机

- 疵点
检验
- 自动
打标
- 验布
报告
- 报告
二维码
- 美标四分
制评分
- 打印
- 卷布
- 自动
对边
- 展布
- 计长、宽

产品展示



SA-2021AI

智能验布机

一机多用 智享科技

技术参数	
设备功能系统包含:	收放卷装置、视觉采集室、操控面板(含面料信息页、疵点详情、摄像头情况等)、自动打标系统、展平装置、自动对边系统、打印系统、手机微信小程序实时监控装置
适用于:	常规针织、梭织纯色布料。(印花、条纹、羽绒服布料暂时不能满足)
检测能力:	疵点检验, 布长、布宽测量
基本检测参数:	最快工作速度: 30m/min 检出率: ~85% 检测精度: 1mm
识别分类能力:	针孔、结头、断纬、断经、勾丝、折痕、粗砂、污渍、破洞、压印、黑印、水印、粗砂
工作参数:	可放布幅宽: 2000mm 可放布直径: 400mm
选配:	色差检验 (色差检验和自动打标系统只能2选1)

智能验布机经济效益		
	人工检验	智能验布机
速度:	15m/min左右, 连续15分钟检验会疲劳, 产能不确定性	30m/min, 24小时持续工作, 产能稳定
检出率:	~70%	~85%
人工:	2人控制1台验布机, 需要专业验布工	2人操控2台验布机, 工人无技术要求
报表:	人工手写, 需整理报表, 耗时、报表不规范, 没有说服力	验布结束后, 自动输出专业验布报告, 可在手机端实时查看

- 特点
- 特点 01
- 人工智能赋能传统验布机, 现有验布工的熟悉度使机器运行更顺畅, 减少员工对新机器的磨合时间。
- 特点 02
- 体积小、节省空间。
- 特点 03
- 采用多个高像素摄像头, 全自动检测布面疵点, 保证检测的连续性与准确性。
- 特点 04
- 根据美标四分制自动评分, 输出专业验布报告。
- 特点 05
- 高效连联: 数据信息可无缝对接ERP, MES等系统。

ARTIFICIAL INTELLIGENCE FABRIC INSPECTION MACHINE

Artificial intelligence endows traditional fabric inspection machine



产品展示



SA-2021AI

ARTIFICIAL INTELLIGENCE FABRIC INSPECTION MACHINE

Technical specification	
The equipment function includes:	Roll to roll system, visual collection area(defect inspection), Control panel (including fabric information page, defect details, camera real-time situation, etc.),labeling system, auto edge alignment system, printing system(include QR code and fabric information,Real-time monitoring inspection situation by WeChat applet
Suitable for :	Normal knitted and woven monochrome/single-color fabric. (Down fabrics, or particularly thin and slippery fabrics, printed & striped fabrics are not applicable)
Detection ability:	Defect detection , Fabric length & width measurement
Basic inspection parameters:	Max. inspection speed : 30m/min; Inspection rate : ~85% ; Inspection precision : 1mm
Detectable defect:	Hole,Stain,Broken,Yarn,Crease mark,Knot,Coarse yarn,Dropping stitch,Broken stitch,Flying,etc
Working parameters:	Fabric working width: 2000mm;Fabric diameter≤400mm
Option:	Color difference inspection (color difference inspection and auto labeling system only can choose one)

Benefit of intelligent fabric inspection machine		
	Traditional manual inspection	Artificial Intelligence fabric inspection machine
Speed:	About 15m/min,15 minutes continuous inspection will lead to fatigue, capacity uncertainty	Max. 30m/min,24-hour continuous operation,stable production capacity
Inspection rate:	~70%	~85%
Worker:	Two worker operate one inspection machine,need professional fabric inspector	Two worker operate two inspection machine,no technical requirements for workers
Inspection report:	Manual handwritten, need to sort out the report, time-consuming, non-standard report, no convincing	Automatically output the professional fabric inspection report , can view in real time on the mobile terminal

Feature

Feature 01	Artificial intelligence endows traditional fabric inspection machine. The familiarity of the existing fabric inspectors makes the machine running more smoothly and reduce the running-in time of new machines.
Feature 02	Small size and saving space.
Feature 03	Equipped with multiple high-pixel cameras,automatically inspect the fabric defect,ensure the continuity and accuracy of the inspection.
Feature 04	According to the American standard four score system, output the professional fabric inspection report , can view in real time on the mobile terminal.
Feature 05	Efficient connection: Data information can be seamlessly connected to ERP, MES and other systems.