



TEC Series

High Temperature
Dyeing Machine

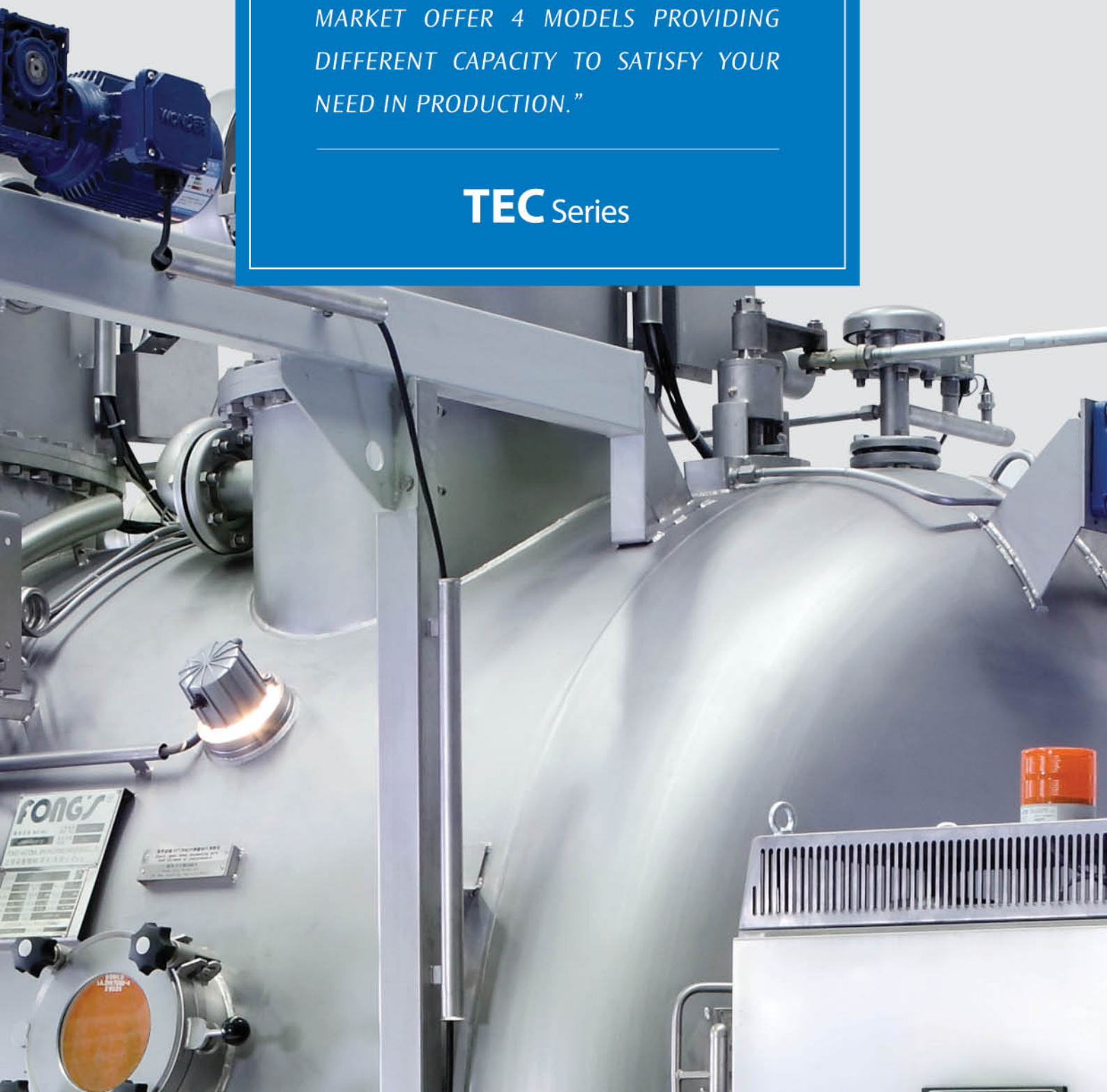
高温染色机



“TEC系列是有效节省能源与高效益的环保染色设备，提供四款不同每管载量，满足不同用户需求，使您的生产流程站在世界尖端。”

“ECO FRIENDLY DYEING SERIES IN THE MARKET OFFER 4 MODELS PROVIDING DIFFERENT CAPACITY TO SATISFY YOUR NEED IN PRODUCTION.”

TEC Series



简介

INTRODUCTION



立信染整成立至今已逾半个世纪，一直致力提供优质染整机械予客户，秉承「诚信为主、科技为用、客户为本」的经营理念，不断追求创新设计，务求迎合现今环保的趋势，控制产品的能源消耗，同时帮助用家降低生产和排污成本。

随著全球纺织品市场对生态和环境保护要求越来越严谨及能源价格不断上涨，已成为染整行业在经营环境中所面临最困难因素，同时并要保持纺织品的优质性，以致“成本低、质量高、环保型”这几个环节已是紧紧相连，但怎样把这几方面套入生产流程中？

新一代TEC系列多功能高温染色机之设计，按著以上几方面在每个细节上尽量满足各项要求，针对适染布种范围 and 不同工艺需求，对各类天然、合成、混纺等纤维物染色加工，全面提升整个染整程序，最终达到“高效、节能、环保”全方位配套。

Established for half a century FONG'S supplies quality dyeing machineries to customers for their best interest in our integrity and commitment. We seek innovation to fit in the latest trend protecting the environment, to reduce energy consumption on our products, cutting the production and effluent cost accordingly.

The increasing restriction in environmental protection and the soaring cost of energy in the global textile market become the biggest concern in the industry, while the dye house owner must maintain the highest quality. As such, "Low Cost, High Quality, Environmental friendly" which becomes the fundamental criteria and how can all these aspects be implemented on the production line?

TEC series High Temperature Dyeing Machine, the state-of-the-art design fulfilled vthe above aspects. It is suitable for different dyeing processes with various types of natural, synthetic and blended fibers, aiming to provide complete solutions: "Efficiency, Energy Saving, Environmental Friendly".

殊荣

DISTINCTION

本产品荣获两大奖项：
TEC SERIES has won：

1

2013香港工商业奖 「机器及机械工具设计优异证书」

2013 HONG KONG AWARDS FOR INDUSTRIES MACHINERY AND MACHINE TOOLS DESIGN CERTIFICATE OF MERIT

颁奖单位：香港中华厂商联合会
Presented by: The Chinese Manufacturers' Association of Hong Kong



2

「2012年度科技进步奖二等奖」 1st RUNNER-UP CHTC TECHNOLOGICAL ADVANCEMENT AWARD 2012

颁奖单位：中国恒天集团有限公司
Presented by: CHTC co. Ltd.



目录 CONTENT

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Part 1

产品介绍

PRODUCT INTRODUCTION

TEC系列高温染色机是有效节省能源与高效益的环保染色设备。符合欧洲标准的不锈钢316Ti/1.4571为主要钢材，给您拥有耐用先进设备，更使您的生产流程站在世界尖端。

The TEC series high temperature dyeing machine is the most efficient and eco-friendly dyeing equipment in the market. Built with high quality 316Ti/1.4571 stainless steel approved by international standards as major material.

- | | | |
|----|-------------|---|
| 06 | 设有多款型号不同载量 | Varies Models with Different Loading Capacity |
| 08 | 节能减排的生产优势 | Eco-Friendly Dyeing Equipment |
| 10 | IIR综合智能水洗系统 | Integrated Intelligent Rinsing |
| 12 | 快思逻辑温控技术 | Fuzzy Logic Temperature Control Technology |
| 14 | 适用于多种物料 | High Level of Versatility for Various Fabrics |
| 15 | 产品规格 | Product Specification |

Part 2

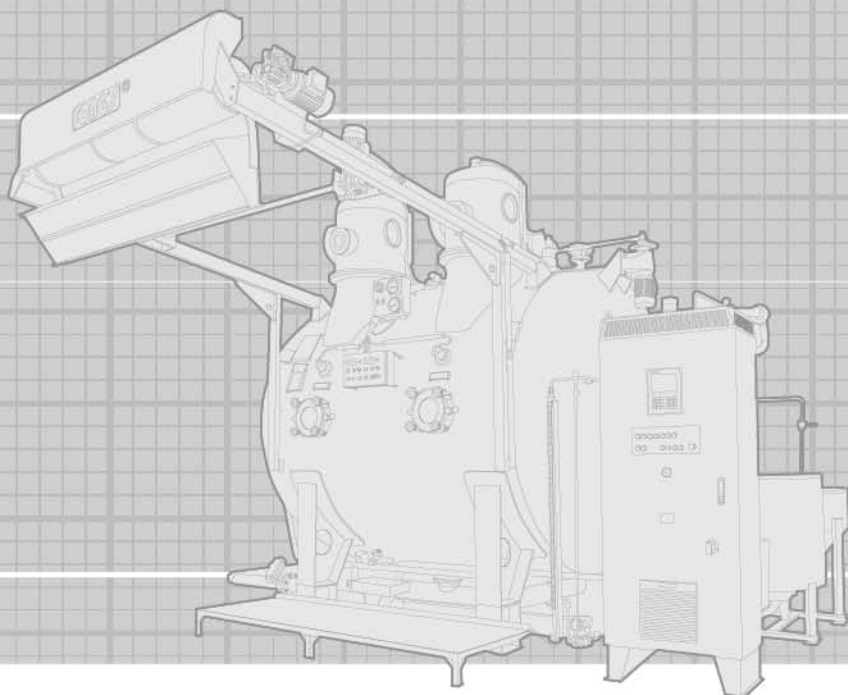
操作系统

CONTROL SYSTEM

配置自动化操作系统，控制器操作简易，有效管理各个染色工艺安排，使生产更易掌握。

Equip with fully automatic control system, and user-friendly controller, manage all necessary dyeing profiles effective and hence easy of production control.

- | | | |
|----|-----------|-------------------------|
| 16 | FC30程序控制器 | FC30 Program Controller |
|----|-----------|-------------------------|



Part 3 外型结构 EXTERNAL STRUCTURE

备有多项独特配置，使整体性能更加完善，大大提升了生产效率。

Equipped with exclusive features, the machine has improved in its all-round performance and productivity.

- 18 | 立式LSD离心泵 Vertical LSD Pump
- 18 | 碎毛收集器 Lint Collector
- 19 | 全自动出布 Automatic Unloading
- 19 | 立式热交换器 Vertical Heat Exchanger

Part 4 其他 OTHER

关于立信染整在匹布染整的行业上的其他产品介绍，及完善的售后服务。

Related products in FONG'S piece dyeing machineries and aftersales services.

- 20 | TOWELTEC 高温毛巾染色机 High Temperature Towel Dyeing Machine
- 22 | 其他产品介绍 Other Machineries
- 24 | 技术服务及保养 Service and Maintenance

设有多款型号不同载量

VARIETY OF MODEL WITH DIFFERENT LOADING CAPACITY

型号多元化

此系列提供多款型号，每款型号皆有不同每管载量，并有1至12管作选择，满足不同用户需要，令生产更灵活，更高效，并选用符合欧洲标准的不锈钢316Ti/1.4571为主要钢材，给您拥有耐用先进设备，更使您的生产流程站在世界尖端。

Diversity of Model

This series offer various models, each providing different capacities from 1 to 12 tubes to satisfy the requirements of different customers' need more flexibility and efficiency. With using high quality 316Ti/1.4571 stainless steel approved by international standards as major material, the TEC series puts you on the world's leading edge.

JUMBOTEC

每管载量 300kg / Chamber



型号 Model No: JUMBOTEC-6T

MINITEC

每管载量 200kg / Chamber



型号 Model No: MINITEC-2T

MIDITEC

每管载量 250kg / Chamber



型号 Model No: MIDITEC-3T

TOWELTEC

每管载量 400kg / Chamber



此型号请参考P.20详细介绍
Please refer to P.20 for details

型号 Model No: TOWELTEC-2T

节能减排的生产优势

ECO-FRIENDLY DYEING EQUIPMENT

在节能减排的大方向下，客户在选择染机时都会以减低机器浴比为首要条件，务求以最少的水处染最多的织物，令在生产上节省不少用水的成本，所以立信在降低浴比的方向上，亦务求能满足市场的需要。

Under the global trend of green production, low liquor ratio is the first priority for customer to choose a dyeing machine to maximize water savings.

Fong's strives to satisfy the customer's objective of lowering the liquor ratio.

环保省水

最低行机浴比低至 1:1.4 (不包括织物含水)。纯棉活性染料染色全程每公斤织物耗水量如下：

Eco-friendly

Running liquor ratio down to 1:1.4 (excluding pick up of fabric) – overall water consumption of cotton reactive dyeing per kilogram:

浅色 Pale Shades	27.5 / 公升L
中色 Medium Shades	37.8 / 公升L
深色 Deep Shades	47.6 / 公升L

节能省时

配备多项控制及水洗技术，节能省时，纯棉活性染料染色全程只需：

Energy & Time Savings

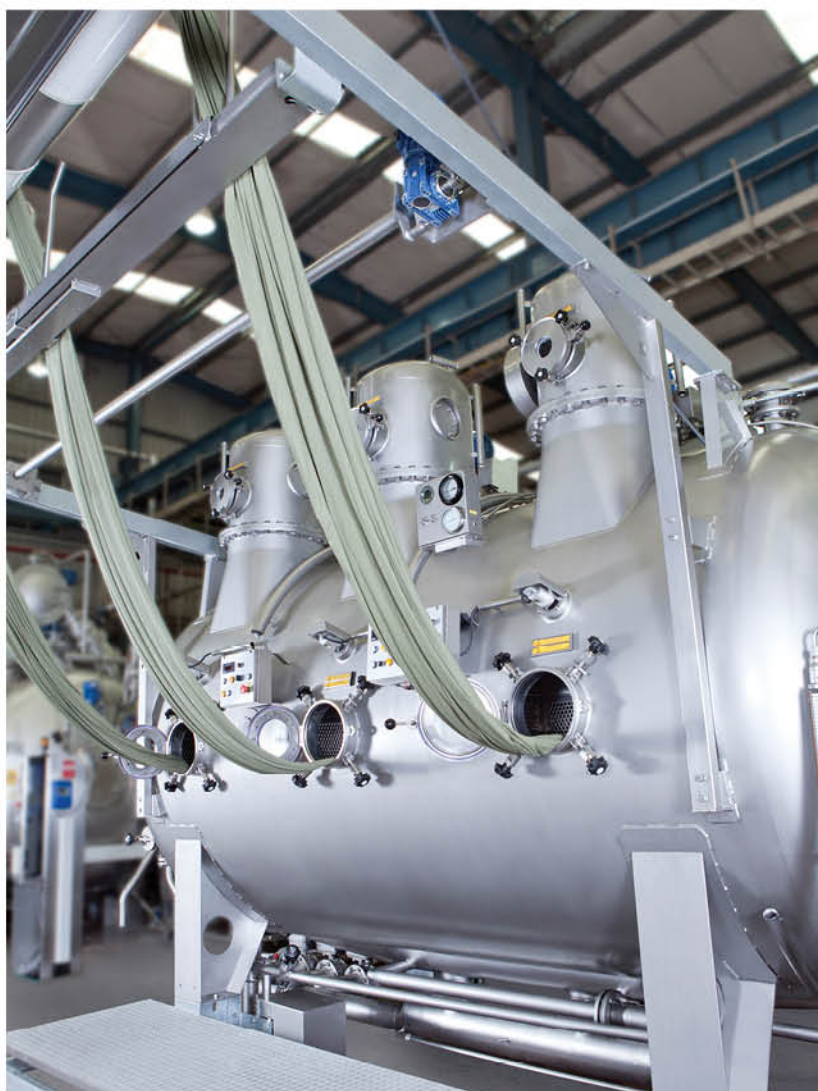
Improved by various control and rinsing technology, the total process time for cotton reactive dyeing:

浅色 Pale Shades	248 / 分钟min
中色 Medium Shades	265 / 分钟min
深色 Deep Shades	281 / 分钟min

(染色全程不包括出入布时间和后处理工序)
(Excluding loading/unloading and after-treatment process time.)

"立信在降低浴比的方向上，务求能满足市场的需要。"

"FONG'S STRIVES TO SATISFY THE CUSTOMER'S OBJECTIVE OF LOWERING THE LIQUOR RATIO."



IIR 综合智能水洗系统

INTEGRATED INTELLIGENT RINSING

织物漂染「无水不行」，然而传统上水洗过程仅靠肉眼和经验判断，缺乏数据化的客观标准，令漂染发展裹足不前。立信采集了不同颜色的数据，寻找个中的数学关系，建构出一个内嵌式计算模型，用作分析及记录各种颜色在水洗过程中的指数变化，大大提高了染色机水洗的效率和预测能力。

It is hard to achieve waterless dyeing and traditional rinsing relies on human eye. The lack of numerical standard hinders the development in auto dyeing. Fong's has built an algorithm to compute color changes by sampling, hence improving the efficiency and predictability.

智能控制

为追求高效自动化染色用家而设，令染色过程智能控制，更加先进准确。以独有专利技术开创新颖环保水洗程序，取代以往人手取样或凭操作经验每次定义水洗完成时间，自动运作至合适清洁条件。

重现性高

革命性主动于排放进行辨色及辨别含盐度以侦测水洗完成进度，用水耗时一目了然。水洗效果每次准确，重现性高，为产品质量重新定义更优秀标准。

提高效率

缸内即时变化的染液水质特性，能在线清楚显示及精确分析，清浊分流辨识更加准确，厂内排放管理更有条理，有效提高生产效率。节能、高效与质量尽在掌握之中。

Intelligent Control

Designed for customers seeking high degree of automation, to replace manual sampling during rinsing or determining rinsing time by experience.

High Reproducibility

The revolutionary system monitors both the residual colour and conductivity of liquor discharged during rinsing; accurately determine the water consumption for rinsing, the degree of reproducibility is highly improved.

Enhanced Efficiency

Any slight changes are clearly shown in real time for analysis, making the drainage progress more organized.



精密机械装置
High precision
Device

IIR 荣获：IIR has won：

2013 香港工商业奖「科技成就奖」
THE TECHNOLOGICAL ACHIEVEMENT AWARD
OF HONG KONG AWARDS FOR INDUSTRIES 2013

颁奖单位：香港科技园

Presented by : Hong Kong Science & Technology Parks

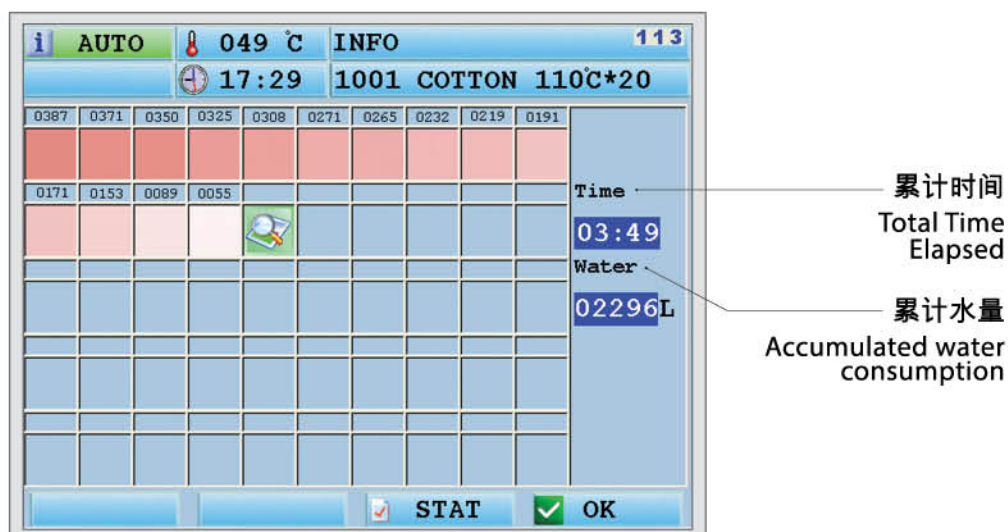


下图为FC30的IIR功能显示画面：

The following screenshots show the IIR function on FC30:

在方格中可显示每1个取样点的当前指数值及颜色，右侧还可显示实时的洗水时间及用水量。

Each grid shows the color of latest sample obtained and its corresponding index, where the total time elapsed and accumulated water consumption are shown on the right.



快思逻辑温控技术

FUZZY LOGIC TEMPERATURE CONTROL TECHNOLOGY



在染色过程中的温度控制对处染后成品的质素有著重要的影响。快思逻辑温控技术实时监测外在环境的物理状况并持续微调温控参数，减少温度误差及保持温度稳定性，能有效减少阴阳色及达至匀染效果，是一项保证匀染的重要技术。此技术亦在2003年荣获「香港工业—科技成就奖」，可见其在业界拥有领先技术。此控制技术甚至能够适应外在物理环境的变化，保证在不同机械状态下仍能提供最好的温控效果，减低维护成本。

实验数据比较

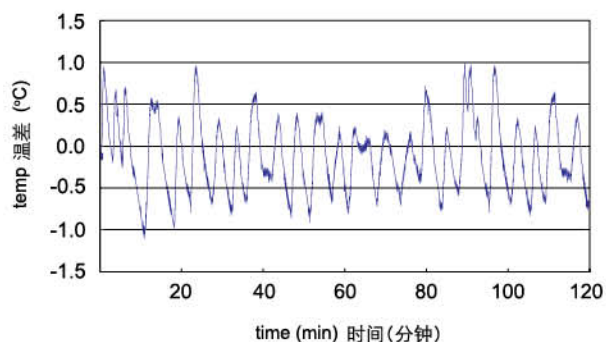
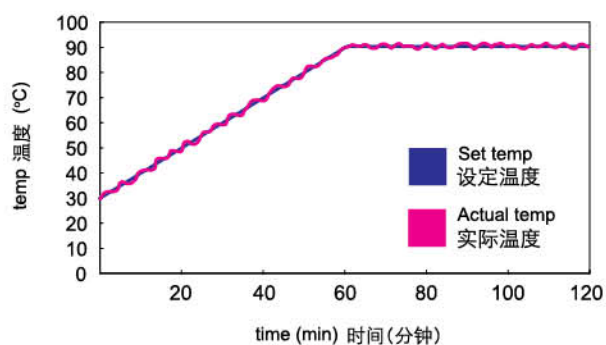
由实验数据可见，与传统PI温控技术比较，快思逻辑温控技术能够有效提高温度控制的准确程度，保持温度稳定性。温度上升率甚至可微调至每分钟0.3℃。从数据可见实际温度及升温曲线与设定的控制升温曲线可说是差不多完全一致。

Temperature control is a critical factor that contributes to the quality of dyeing. Having realized the defects using conventional "PI" control method, FONG'S developed an innovative Fuzzy Logic temperature control method. The Fuzzy Logic technology monitors the ambient physical factors continuously in real time and finetune the control parameters accordingly, to stabilize the temperature and reduce its error. This leading technology has won The Hong Kong Industrial Award in 2003. This control can even adapt to the changes from surrounding to ensure optimum control under different conditions, hence saving the maintenance cost.

Experimental Data

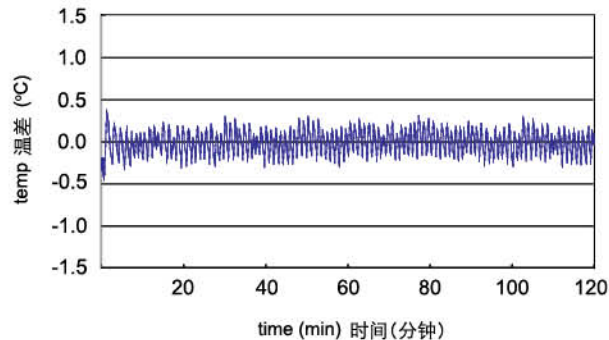
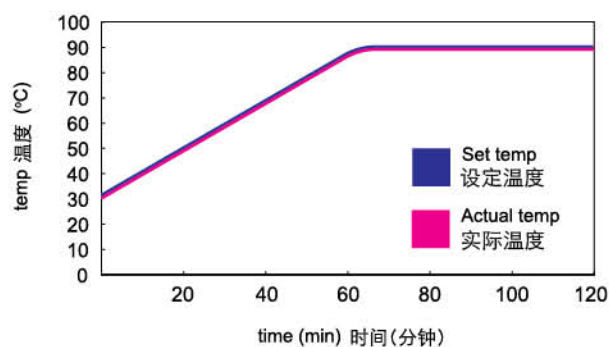
As shown from experimental data, the Fuzzy Logic temperature control technology can effectively improve the accuracy of control, comparing with the conventional PI method and maintain its stability. The actual temperature as well as the heating curve are almost the same to the control curve, as seen from the data.

传统PI控制 Conventional PI Control



结果:温差 $\pm 1.0^{\circ}\text{C}$
Result: Temp $\pm 1.0^{\circ}\text{C}$

快思逻辑控制 Fuzzy Control



结果:温差 $\pm 0.3^{\circ}\text{C}$
Result: Temp $\pm 0.3^{\circ}\text{C}$

"由误差数据可见，与传统 PI 温控技术比较，快思逻辑温控技术所造出的误差范围相当小，只有正负约 0.3°C 。"

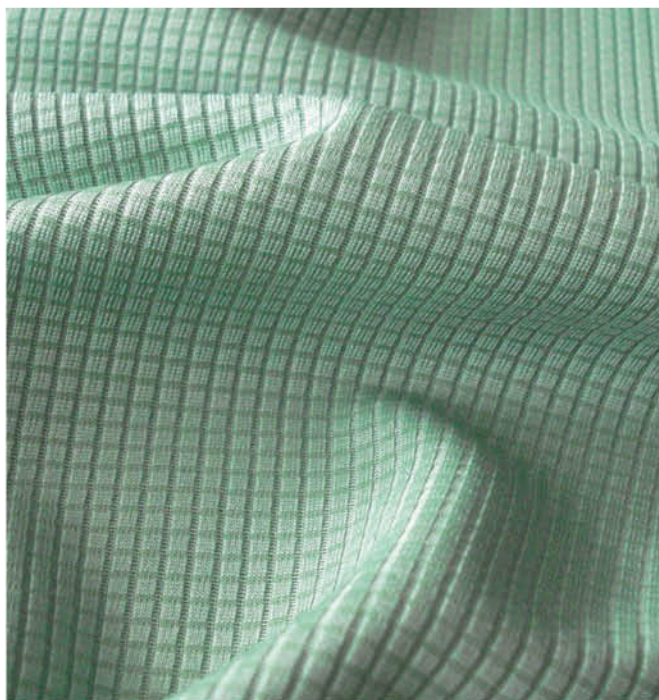
"THE ERROR USING THE FUZZY LOGIC TEMPERATURE CONTROL TECHNOLOGY IS APPARENTLY SMALLER COMPARING TO THE CONVENTIONAL PI CONTROL, RANGING WITHIN $\pm 0.3^{\circ}\text{C}$ AS OBSERVED IN THE ERROR CHART."

适用于多种物料

SUITABLE FOR VARIOUS FABRICS

有效地解决高密度易生折痕的针织物，例如40S/2，26S/1，20S/1等的染整加工问题；对于敏感色，TEC系列能提高其正品率，并能处染如细旦莫代尔、细旦黏胶等敏感织物；也能处染化纤及其混纺织物。

Capable of dyeing high density, crease sensitive fabrics, such as 40S/2, 26S/1, 20S/1 etc. It is also capable to reduce defective rate when dyeing sensitive colors. The TEC series can dye sensitive fabrics like micro modal and viscose as well as synthetic fiber and blend fiber products.



产品规格

PRODUCT SPECIFICATION

系列 Series	型号 Model		管数 No. of chambers	载量 Capacity (kg)	安装功率 Installed Power (kW)	行机功率 Operating Power* (kW)	外型尺寸 Dimension(mm)		
	TEC3	TEC2					L	W	H
JUMBOTEC	JUMBOTEC3-1T	JUMBOTEC2-1T	1	300	13	7.8	3660	4850	3750
	JUMBOTEC3-2T	JUMBOTEC2-2T	2	600	24	14.8	4800	4850	3750
	JUMBOTEC3-3T	JUMBOTEC2-3T	3	900	30	20.6	6100	5020	3850
	JUMBOTEC3-4T	JUMBOTEC2-4T	4	1200	35	25.9	7500	5200	3900
	JUMBOTEC3-6T	JUMBOTEC2-6T	6	1800	53	40.5	10230	5450	3900
	JUMBOTEC3-8T	JUMBOTEC2-8T	8	2400	69	51.7	12500	5450	3900
	JUMBOTEC3-12T	JUMBOTEC2-12T	12	3600	95	77.3	19050	5800	4550
MIDITEC	MIDITEC3-1T	MIDITEC2-1T	1	250	13	7.8	3660	4450	3000
	MIDITEC3-2T	MIDITEC2-2T	2	500	24	14.8	5000	4450	3000
	MIDITEC3-3T	MIDITEC2-3T	3	750	30	20.6	6520	4620	3100
	MIDITEC3-4T	MIDITEC2-4T	4	1000	35	25.9	8150	4800	3200
	MIDITEC3-6T	MIDITEC2-6T	6	1500	53	40.5	11300	5050	3200
	MIDITEC3-8T	MIDITEC2-8T	8	2000	69	51.7	13980	5050	3200
	MIDITEC3-12T	MIDITEC2-12T	12	3000	95	77.3	20200	5350	3500
MINITEC	MINITEC3-1T	MINITEC2-1T	1	60	9	5.5	2750	3900	2730
	MINITEC3-1T	MINITEC2-1T	1	120	11	7.0	3400	4000	2730
	MINITEC3-1T	MINITEC2-1T	1	200	13	7.8	3400	4450	3000
	MINITEC3-2T	MINITEC2-2T	2	400	24	14.8	4480	4450	3000
	MINITEC3-3T	MINITEC2-3T	3	600	30	20.6	5480	4620	3100
	MINITEC3-4T	MINITEC2-4T	4	800	35	25.9	7100	4800	3200
	MINITEC3-6T	MINITEC2-6T	6	1200	53	40.5	9720	5050	3200
	MINITEC3-8T	MINITEC2-8T	8	1600	65	51.7	11850	5050	3200
	MINITEC3-12T	MINITEC2-12T	12	2400	95	77.3	16900	5350	3500

备注： • 以上尺寸以标准规格而定。
• 行机功率为染色时的主要能耗。
• TEC2配备过滤器 / TEC3配备碎毛收集器

Remarks: • The above dimension is referring to the standard configuration.
• Operating Power is the primary energy consumption during dyeing.
• TEC2 equipped with Filter / TEC3 equipped with Lint Collector

技术数据 Technical Data

1. 设计温度	Design temp.	140°C
2. 设计压力	Design pressure	3.0bar
3. 升温率	Heating gradient	25°C ~ 100°C 平均 approx. 5°C/min 100°C ~ 130°C 平均 approx. 2.5°C/min (以7bar干燥饱和蒸汽压力计, dry saturated steam pressure at 7bar)
4. 降温率	Cooling gradient	130°C ~ 100°C 平均 approx. 3°C/min 100°C ~ 80°C 平均 approx. 2°C/min (以25°C 3bar冷却水压力计, cooling water at 3bar, 25°C)

FC30 程序控制器

FC30 PROGRAM CONTROLLER

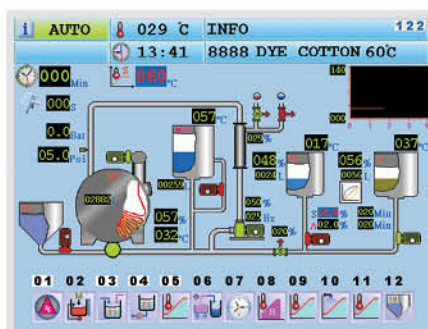
新一代FC30程序控制器，配备6.5寸、640x480像素、TFT彩色液晶显示屏。配合新颖控制功能，提供了最具经济效益的控制方法。FC30并可与我们开发的中央电脑系统VIEWTEX或THEN-TDS联结起来，实配对整个染色车间的全面电脑化管理和控制。

The new generation of FC30 program controller has a 6.5-inch 640x480-pixel, TFT color LCD display together with novel control functions, providing the most cost-effective control. FC30 can also integrate with our VIEWTEX and THEN-TDS central computer system, providing comprehensive control management.



流程图

Schematic Diagram



流程图画面，能更清晰地观察批次的重要运行参数。

The Schematic diagram clearly shows most of the important running parameters of each batch in single display.

工艺曲线图

Processing Curves

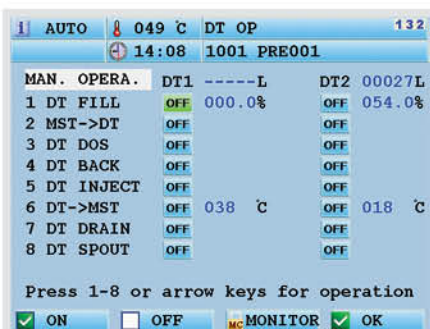


同时记录最多8条参数曲线，并预设共有4个画面，可供用户自行组合所需的工艺曲线图。

FC30 program controller can store up to 8 different processing curves. User can also pick 4 sets of processing curves with their own combinations.

面板手动操作功能

Manual Control Buttons on UI



在FC30上的操作面板上,标配了主缸、料桶及MST手动操作按键功能,方便工厂实现集中管理。

Manual Control Button for Main Tank, Dosing Tank and MST on the User Interface of FC30 as standard, better control under Central Management System.

自动领航功能

Navigation Function



自动将运行参数导入，自动生成所需的工艺程序，亦可自行创建不同批号（纱品种）的运行参数，从而建立用户独有的数据库，简化操作流程之余，亦可减少人为错误。

User can save their recipes for an unique database to simplify the operation and prevent human error.

强大水比计算及扣水功能

Powerful Liquor Ratio Calculation and Liquor Deduction Function



在编写主缸计量入水及MST入水功能时,可选择多个水比计算值，以便实现全程按预定水比行机,此功能极大方便了编程及提高染色程序的通用性。

User can define a multiple of liquor ratio calculation method, this enables a completely automated system with accurate control of liquor ratio at any step throughout the cycle, provides convenience and repeatability on dyeing process programming.

能耗报告

Utility Consumption Report



标配提供估计的能耗统计报表，包括：水、电、蒸汽的用量及成本报告。机器选配了水、电、蒸气用量仪表，可提供真实的能耗统计报表。

Estimated utility consumption report of water, electricity and steam of each batch is provided. Actual consumption values can be shown if the machine equips with metering devices of water, electricity and steam.

标准结构

STANDARD FEATURE

立式LSD离心泵
VERTICAL LSD PUMP



低吸口设计，设有内置式过滤器，有效延长运行寿命，行机浴比更低，节省整体浴比。

Low suction design lowers the liquor ratio; internal filter effectively extend the lifespan.

特点：

- 主泵吸口位置更低，达到低浴比要求。
- 水泵与马达一体式结构，外型紧凑；省却了轴承座及联轴器，效率更高。
- 以自身冲洗冷却润滑方式，无需外接冷却喉路，节省大量冷却用水。

Characteristics:

- Lower pump suction to meet the low liquor ratio requirements.
- Integrated design of pump and motor can eliminate the bearing housing and coupling for better efficiency and maintenance-free.
- Self flush for cooling and lubrication. No need to connect the external water source for cooling and save a lot of cooling water.

碎毛收集器
LINT COLLECTOR



独有专利设计，自动收集、堆积及排放碎毛，无须人手操作或停机清理，处染毛巾、卫衣布等更为重要，除不用人力外更可节省生产时间。

Lint Collector automatically filters, accumulates and discharges lint. Production time could be saved without excess labor effort and scheduled maintenance.

特点：

- 独特设计，使刀片紧贴筛网表面，有效刮走碎毛。
- 不会造成因过滤器堵塞而引起的喷嘴压力的不稳/掉压，影响染色质量。
- 无需停机清理过滤器，节省工艺时间，增加生产效率。
- 不用厌烦的清理工作，节省操作人员的劳动。

Characteristics:

- Sophisticated cutting tools design. Cutting blades are in close contact with the sieve for best removal of the lint.
- No blockage of filter and hence nozzle pressure is stabilized. Ensure the excellent dyeing result.
- No need to stop for cleaning filter. Reduce process time and increase productivity.
- The annoying cleaning is not required. Save labor force.

全自动出布

AUTOMATIC UNLOADING



X-Y 向摇折及出布装置，纵横双向同时多管高速出布，出布节奏照顾长方形载布车的每个空间，充分使用载布车宽度。

Smooth, simultaneous and high speed unloading by a double-axis plaiter covering every corner of a rectangular trolley.

特点：

- 独有专利设计。
- 全自动双向（纵向、横向）摆动，实现高度自动化出布。
- 可实现多管同时出布。
- 摇摺斗使布匹整齐地折叠在载布车上。
- 气动装置的横向摆动可充分装满载布车的宽度。
- 可降低操作工的劳动力及减省出布时间。
- 可配合长型载布车使用。

Characteristics:

- Patented design.
- Bi-directional movement to fulfill the automation of fabric unloading.
- Simultaneous Unloading for multi-tubes is achievable.
- Unloading plaiter folds and places the fabric regularly onto the rectangular trolley.
- The transverse direction by pneumatic actuator fully utilizes the width of rectangular trolley.
- Reduce work load of operators and shorten the unloading time.
- Best fit with the rectangular type fabric trolley.

立式热交换器

VERTICAL HEAT EXCHANGER



能快速排净冷凝水及染液，缩短冷热转换耗时，并能避免水锤产生及水垢的形成，延长使用寿命。

Effectively drains condensates and dye liquor, reduces medium exchange time, prevents flow and scaling problems, enhance durability.

特点：

- 立式热交换器兼作染液循环回路的一部份及染液升降温作用，合理优化结构，对降低浴比有帮助。
- 立式布置能即时排净冷凝水及染液，缩短冷热转换所消耗的时间。
- 同时避免水垢形成，延长热交换器使用寿命和降低热量的损失和浪费。

Characteristics:

- The heat exchanger acts as a part of the circulating system and provides heat transfer for the liquor, the piping is optimized to reduce liquor ratio.
- The vertical layout helps to drain the condensates and dye liquor promptly, reduce both cooling and heating time..
- Prevents water scalings, enhance durability and reduces heat loss.

注意 Note

热交换器的设计是基于干燥饱和蒸汽，如使用不当的蒸汽源（如过热蒸汽），会对热交换器的效能及寿命构成影响。
The heat exchanger is designed for dry saturated steam. Any misuse of steam supply (e.g. superheated steam) will have adverse effect to the performance and service life.

TOWELTEC 高温毛巾染色机

High Temperature Towel Dyeing Machine

除了性能结构上与TEC系列一致外，专门按照处染毛巾织物的高档用户之高度要求而设计，而独特的喷咀结构，使织物一直处于轻柔膨松状态，有效减少乱毛问题，适合处染毛巾布、高毛圈布、重质帘布、家用装饰布和汽车布等，是目前市场上能有效节省能源与高效益的厚重布类染色设备。

Apart from the similar mechanical design of TEC series; TOWELTEC is designed for superior requirement from the high-end towel dyeing. Exclusive nozzle design keeps fabric opened and relaxed, effectively reduces loop distortion problem. It is suitable for Terry towel, dense curtains, household upholstery fabrics, and automotive fabrics. TOWELTEC is the most energy saving and high efficient heavy fabrics dyeing equipment in the market.

碎毛收集器
Lint Collector



处染毛巾织物时出现大量的掉毛，收集器能将碎毛全部收集堆积排放，无需停机，全自动运作，令处染毛巾过程省却劳动力与时间。

Large amount of lint is generated during the towel dyeing process. The collector can accumulate and automatically discharge them at a right time without suspending the operation. It greatly saves time and labor cost in production.

特为处染毛巾织物而设
Especially for Dyeing Towel



针对毛巾织物独有的特性如捻度、高毛圈、高膨松、超柔软和手感及触感舒服等设计，处染膨松织物从而获得优异的质量效果。

focusing Design on the unique features of towel, such as yarn twist, loops piles, softness, and hand feel etc., Supreme quality is achievable through dyeing fluffy materials.

"专门按照处染毛巾织物的高档用户之高度要求而设计，是目前市场上最节省能源与高效益的厚重布类染色设备。"

"TOWELTEC IS DESIGNED FOR SUPERIOR REQUIREMENT FROM THE HIGH-END TOWEL DYEING AND IT IS THE MOST ENERGY SAVING AND HIGH EFFICIENT HEAVY FABRICS DYEING EQUIPMENT IN THE MARKET."



产品规格 Specification

型号 Model	管数 No. of chambers	载量 Capacity (kg)	安装功率 Installed Power (kW)	行机功率 Operating Power* (kW)	外型尺寸 Dimension (mm)		
					L	W	H
TOWELTEC3-1T	1	400	23	14.2	4540	5220	4085
TOWELTEC3-2T	2	800	33	24.3	5870	5405	4130
TOWELTEC3-3T	3	1200	52	38.1	8680	5675	4195
TOWELTEC3-4T	4	1600	65	47.8	10200	5760	4195
TOWELTEC3-6T	6	2400	92	72.5	13500	6120	4365

备注：

- 以上尺寸以标准规格而定。
- 行机功率为染色时的主要能耗。
- TEC3配备**碎毛收集器**

Remarks:

- The above dimension is referring to the standard configuration.
- Operating Power is the primary energy consumption during dyeing.
- TEC3 equipped with **Lint Collector**

其他产品介绍

OTHER MACHINERIES

SYNERGY 8

高温气流染色机

High Temperature Airflow Dyeing Machine



新一代气流染色机，突破以往气流染色机最大6管配置的限制，开拓1至12管多管独立操作新领域，处理织物种类广泛，令生产更灵活，品质更有把握，设备保养更方便。

The most advanced airflow dyeing machine, breaking the barrier of loading capacity, the model extends up to 12 tubes with individual control, suitable for various kinds of fabrics with better flexibility, quality and ergonomics.

特点 Features

- 每管独立风机
- 组合式雾化交换系统
- IIR 综合智能系统
- 碎毛收集
- 全自动出布
- 立式离心泵
- 斜立式热交换器
- 溢流化盐
- VOLMEDOS自动定量注料
- Individual Blower Per Tube
- Integrated Misting Nozzle System
- Integrated Intelligent Rinsing (IIR)
- Lint Collector
- Automatic Unloading
- Vertical Centrifugal Pump
- Inclined Heat Exchanger
- Overflow Salt Additions
- VOLMEDOS Dosing System

ALLFIT

中小样高温染色机

Medium Batch Dyeing Machine



专为小批量及试样织物染色而设计，浴比和织物运转周期与常规设备相若，研发的染色配方可直接用于生产中。现时已有超过2000台在全世界染厂内使用中。

ALLFIT is designed for medium batches and available in different machine sizes. The liquor ratio and fabric circulation time are similar to that in large scale production, such that the recipe developed can be adopted directly. At present there are more than 2000 ALLFITs running in dyehouses around the globe.

特点 Features

- 染色效果准确重现
- 高程度自动化
- 配套大机
- 小规模生产
- 随装即用
- 可用作开拓新工艺
- High Reproducibility
- High Deg. Automation
- Compatible for Production
- Designed for Medium Batches
- Plug & Run
- For Finding New Recipes

BSD

单层预缩烘干机

Shrinkage Dryer



具有自然松弛、无张力烘干的特点。适用于平幅织物及圆筒织物的后整理，为织物提供优质、高效的最佳烘干效果。

BSD Shrinkage Dryer is designed for natural, relaxed and tension-free drying. The dryer provides high quality finishing of both woven and knitted materials in either open width or tubular form.

特点 Features

- 无张力烘干过程
- 织物尺寸稳定
- 烘干质量高
- 圆筒织物的后整理
- 简易操控
- 整体式电动鼓风机
- Tension Free Drying
- Stabilizing the fabric dimension
- High Quality of Drying
- Finishing of Tubular Fabrics
- User-Friendly Control Console
- Integrated Centrifugal Blower

SCN

挤缩整理机

Compacting Machine



为矫正及稳定平幅织物的横向和纵向尺寸而设的挤缩整理设备，能配合立信门富士拉针机，及配置摇折及上卷装置，大幅提升您的生产力。

SCN Compacting Machine is designed for correcting and stabilizing the dimension of open-width fabric material in both transverse and longitudinal directions. Combined with the levelling machine of Monforts Fong's, plaiting device and batching device, it can greatly improve your productivity.

特点 Features

- 德国拉伸技术
- 不配拉针机单元亦可
- 织物尺寸调整效果稳定
- 配合不同工艺
- Stretching Techniques of Germany
- Without Leveling Machine Unit
- Dimensionally Stable Fabric
- For Different Processes

技术服务及保养

SERVICE AND MAINTENANCE

立信染整提供全面、及时和完善的售前及售后技术支援及服务，在中国、美洲、欧洲和多个亚洲国家雇有100多名资深的专业技术服务工程师，为全球客户提供服务。在印度新德里成立的立信技术服务私人有限公司，于孟买及蒂鲁普均设有办事处，为印度及邻近国家的客户提供全面的技术支援。

立信染整力求在24小时内解答客户咨询，同时鉴别并分析客户需求，以确保公司可以根据合同按时完成每项工作。

FONG'S National Engineering offers world-class aftersales support including installation, commissioning and maintenance.

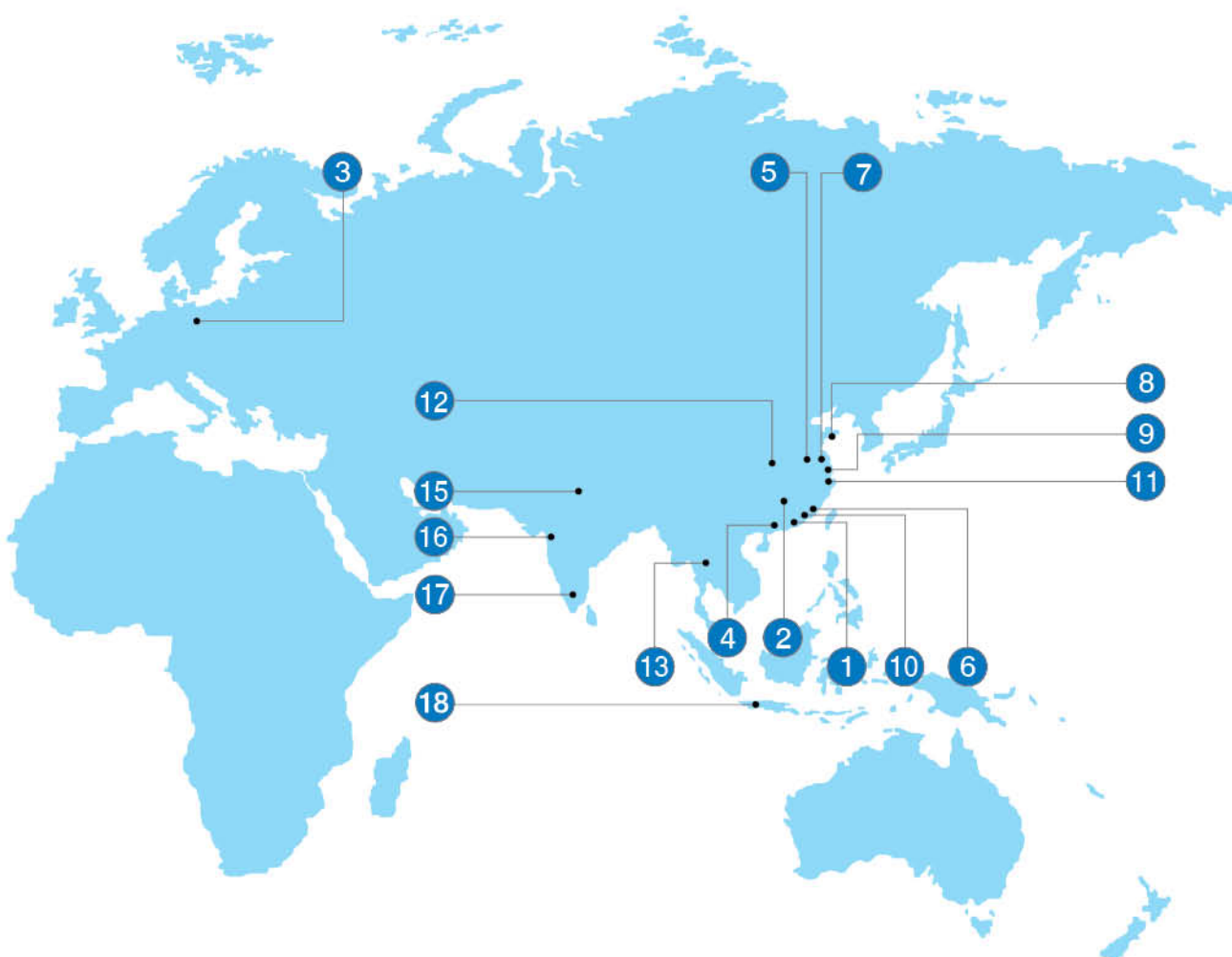
The service is provided around the globe, with a team of over 100 qualified professional service engineers in China, as well as its own engineers stationed throughout Americas, Europe and other Asian countries. The set-up of fong's technical services private limited in New Delhi, India with branch offices in Mumbai and Tirupur also provide full range technical services to our customers in india and neighbouring countries. FONG'S National is committed to cater customer enquiries within 24 hours. Customers' needs are valued for continual improvement. Every task will be completed on schedule according to the contract.



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TEC Series

High Temperature
Dyeing Machine

高温染色机

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