



广州达意隆包装机械股份有限公司  
Tech-Long Packaging Machinery Ltd

如欲了解更多达意隆产品，欢迎访问我们的网站  
For more detailed information on Tech-Long products, please visit our website at:

[www.tech-long.com](http://www.tech-long.com).

本资料的内容会因产品更新而变化，欲了解详情，请与我们的销售人员联系。  
本资料虽然经过多次校对，以求准确，但仅供参考使用。  
一切以实物及产品铭牌和说明书为准。

Tech-Long keeps working on further development of our products. Thus, for the latest information, please contact our sales representatives.  
Although information in this brochure has been updated many times for accuracy, we recommend it is used for reference purpose only.  
Please take the practical machines, nameplate, and operation specification as standard.

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# 吹灌旋一体机

## Bottle BFC Combi-block



# 低碳时代，我们先行

Low carbon era, we advance ahead

## 达意隆饮料用环保超轻量瓶震撼上市！

Beverage in environment-protection Light weight bottles from Tech-Long launched into market !



## 为什么要选择达意隆？ Why choose Tech-Long?

一、高效率, 高得率, 低能耗

High efficiency; high yield; low energy consumption

达意隆全套生产设备整线生产效率不低于85%，成品收获率不低于99.5%，确保收益最大化

The production efficiency of Tech-Long's whole line is not less than 85%, while yield rate of finished products is not less than 99.5%, thus ensuring the maximum of income.

二、达意隆是目前世界上少有几家公司具有注塑，吹瓶，灌装研发能力的公司之一  
At present, Tech-Long is one of the few company with the R & D capacity of injection molding, bottle blowing and filling in the world.

三、瓶坯及瓶型设计能力

The ability to design preforms and bottle shapes

四、达意隆具有目前行业最领先的研发设计平台及实验室设备

Tech-Long has the most leading R & D design platform and laboratory equipment in the industry at present

五、灵活和开放的合作方式，给客户提供最优化的可选

Its flexible and open modes of cooperation offer the most optimized options to customers

PET瓶装水高速发展

The rapid development of PET bottled water

国际国内对节能减排的要求越来越高

Higher and higher requirements for energy conservation and discharge reduction

市场竞争压力巨大，成本控制需求高

Huge pressure of market competition; high demand of cost control

可持续发展及绿色工厂概念逐步推广

The gradual popularization of the concept of sustainable development and "green" factory



# 吹灌旋一体机

Blowing-Filling-Capping Combi-block

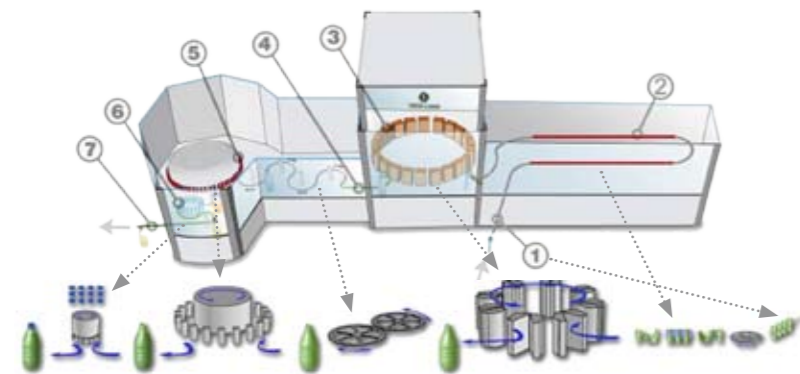
单台设备完成吹瓶、灌装、旋盖整个动作

A single unit of equipment can complete all processes including bottle blowing, filling and capping



由单机完成从 **瓶坯** 到 **瓶装液态产品** 的创新包装技术

The innovative packing technology with a single unit machine to complete the whole process from preform to bottled liquid products



1. 瓶坯输入 Preform Input
2. 加热 Heating
3. 吹瓶 Bottle blowing
4. 星轮传动 Star wheel transmission
5. 灌装 Filling
6. 封盖 Capping
7. 产品输出 Product output

## 技术参数 Technical parameters

灌装物: 水、果汁、茶饮料、功能性饮料、含汽饮料  
Filling stuff: water, fruit juice, tea drinks, functional drinks, carbonated drinks

包装: PET瓶  
Packing: PET bottle

容积: 250毫升至2.5升  
Volume: from 250 to 2500 ml

瓶型: 圆形、正方形或矩形  
Bottle shapes: circular, square or rectangular

生产率(瓶/小时): 6,000 - 43,200  
Capacity (bottles/hour): 6,000-43,200

灌装技术: 等压灌装、负压灌装、压力灌装、重力灌装  
Filling technology: isobaric filling; negative pressure filling, pressure filling; gravity filling

吹瓶模腔数量: 6 - 24  
The number of bottle-blowing molding cavity: 6-24

灌装阀数量: 24 - 90  
The number of filling valves: 24-90

封盖头数量: 6 - 18  
The number of capping heads: 6-18

# 吹灌旋一体机

Blowing-Filling-Capping Combi-block

## 技术保障 Technical guarantee

达意隆为全球少数几家同时掌握PET吹瓶机和灌装机两大关键技术供应商, 基于丰富的整线项目经验, 整合“吹瓶技术”和“灌装技术”是吹灌旋设备技术的根本保障, 通过在线成型技术、吹瓶工艺、灌装工艺和灌装设备上的创新, 实现整机能耗降低25%以上, 填补国内空白, 达到国际先进水平。

Tech-Long is one of the few suppliers in the world that have mastered such two key technologies of PET bottle-blowing and filling. Based on its substantial whole-line project experience, integration of “bottle-blowing technology” and “filling technology” is the fundamental guarantee for the equipment technology of BFC Combi-block. Through innovation of the online molding, bottle-blowing technology, filling and filling equipment, it can reduce the energy consumption of complete machines by over 25%, fill a vacancy in the industry in China and reach the international advanced level.

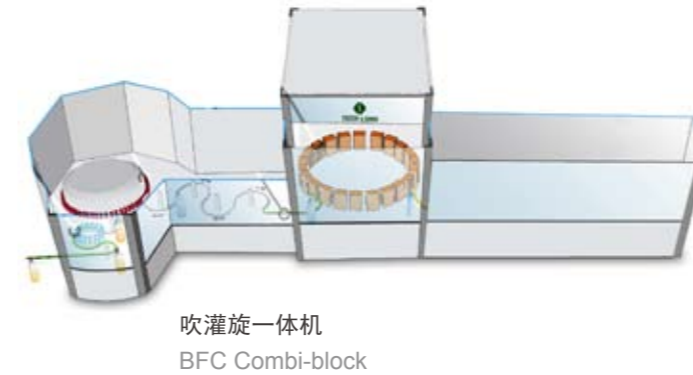
# 吹灌旋一体机

Blowing-Filling-Capping Combi-block

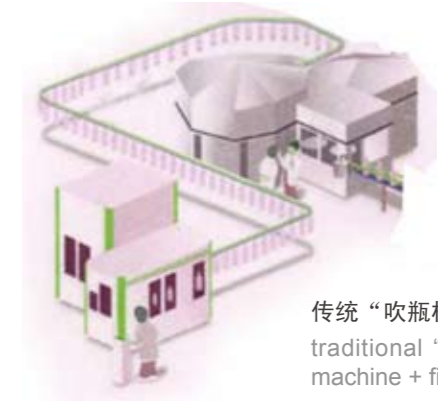
# 吹灌旋一体机与传统“吹瓶机+灌装机”对比

The contrast between the BFC Combi-block and the traditional “bottle-blowing machine + filling machine”

## 吹灌旋机的优点 The advantages of bottle BFC Combi-block



VS



## 对比数据 Correlation data

- **综合效率** 提高了5% (吹灌旋一体机综合效率目前达到98%)  
Enhancing the overall efficiency by 5% (The efficiency of the BFC Combi-block now reaches 98%)
- **设备投资** 降低10-20% (无需配置风送道及洗瓶机)  
Reducing the investment in equipment by 10-20% (it is unnecessary to equip air conveyor and bottle rinser)
- **厂房投资** 减少65% (设备占地面积大大减少)  
Reducing the investment in plant by 65% (The coverage area of the equipment is reduced greatly)

- **能量消耗** 降低15-20% (操作人员减少; 降低启动损耗; 无风送能耗、卡瓶损耗)  
Reducing the energy consumption by 15-20% (fewer operators; lower start-up wastage; no energy consumption for air conveyor or bottle-jamming waste)
- **纯水用量** 减少约35% (无需冲瓶水)  
Reducing the amount of pure-water used by about 35% (it is unnecessary to wash bottles with water)

注: 以上数据为吹灌旋一体机与传统“吹瓶机+灌装机”的对比  
Note: The above-mentioned data are the contrast between BFC Combi-block and the traditional “bottle blowing machine + filling machine”  
计算条件: 500毫升瓶装水线, 每小时3万瓶, 不同产品情况下有所不同  
Calculation conditions: 500-ml bottled water line; 30000 BPH; varying with different products.

# 轻量化吹灌旋一体机

Light bottle blowing-filling-capping Combi-block

轻量瓶包装符合了全球低碳经济的主题。轻量化吹灌旋一体装备与传统饮料设备相比，具有高效率、低成本、低能耗优势，由吹灌旋一体机取代传统的吹瓶、灌装、旋盖单机分离的生产工艺将是食品包装机械行业的发展趋势。

The light-weight bottling coincides with the theme of global low-carbon economy. Compared with traditional beverage equipment, Light bottle BFC Combi-block has such advantages as high efficiency, low cost and low energy consumption. Replacing the traditional production technology marked by the separation of bottle-blowing, filling and capping machines with the Light bottle BFC Combi-block will be the trend in the industry.

## 1、全面降低瓶坯克重

Reducing the gram weight of preforms completely

## 2、减小瓶壁厚度

Reducing the thickness of bottle wall

## 3、优化瓶坯加热系统

Optimizing the heating system of preforms

## 4、开发新型夹瓶装置和灌装阀，以实现轻量瓶的灌装；

Developing new-type bottle-clipping devices and filling valves to realize the filling of light-weight bottles

## 5、采用全新的理盖系统，附带检测装置，具有自动剔除功能

Adopting a brand-new cap-sorting system, accompanied with a detecting device with the function of automatic rejection

# 轻量化吹灌旋一体机

Light bottle blowing-filling-capping Combi-block

## PET轻量瓶 PET light-weight bottles

**全新瓶型盖型设计-超轻的瓶子克重** The brand-new design of bottle and cap shapes-extra-light gram weight of bottles

目前550ml PET瓶重量: **15g-19g** The current weight of 550ml PET bottles: 15g-19g

550ml PET轻量瓶重量: **9.8g-11.8g** The weight of 550ml PET light-weight bottles: 9.8g-11.8g

新的26mm 轻量盖重量: **1g** The weight of new 26mm light-weight caps: 1g

**全新的瓶坯设计** A brand-new design of preforms

超轻的瓶口重量: **2g** Extra-light weight of bottle neck: 2g

创新的小瓶口设计: **26mm** Innovative design of small bottle neck: 26mm

超薄的支撑环设计: **1.2mm** Extra-thin support ring design: 1.2mm

**吹/灌/旋技术** Blowing/filling/ capping technology

省水、节电、节省厂房面积 Saving water, power, and the area of plant

加氮气保证了瓶子的强度 Injecting nitrogen to guarantee the strength of bottles



# 轻量化吹灌旋一体机

Light bottle blowing-filling-capping Combi-block

## 创新点 Innovative points

1、轻量化瓶专用瓶形设计，550ml瓶克重仅为9.8g-11.8g

The special design of light-weight bottles; the gram weight of 550ml bottles is only 9.8g-11.8g

2、高速吹灌旋一体化：

High-speed integration of blowing, filling and capping

•最高产量：43200 BPH（容积≤750ml水瓶）

The maximum capacity: 43200 BPH (Volumes≤750 ml water bottles)

•双变频电机同步驱动（吹瓶机+灌装机）

Synchronously driven by dual variable frequency motor (bottle blowing machine + filling machine)

3、高效红外光谱吸收加热法、瓶胚高密度38mm排列加热设计、四段三变量优化控制加热系统

The highly-efficient infrared spectrum absorption heating method; the high-density 38mm arrangement heating of bottle blanks; four-section three-variable optimized control heating system

4、优化凸轮曲线设计、稳定高效的吹瓶工艺、模具小型化和模架优化设计、瓶口保护优化设计、瓶坯静电除尘

Optimized cam curve design, stable and highly-efficient bottle-blowing technology, small-size mould, optimized die carrier, bottle neck protection and optimization design, bottle blank electrostatic precipitation

5、高速重力灌装及其灌装阀优化设计、高速准确灌装液位控制、注入一定计量的液态氮气

High-speed gravity filling and filling valve optimization design, high-speed accurate filling liquid level control, injecting a certain amount of liquid nitrogen

6、高速吹瓶缺陷（瓶口损伤、破瓶、成型不良）图像检测、瓶盖旋封质量快速图像识别检测、透明液体异物快速图像识别检测

High-speed bottle-blowing defect (bottle neck damage, broken bottle, and improper molding) image detection, bottle capping and sealing quality high-speed image recognition and detection, transparent liquid foreign-matter high-speed image recognition and detection



还原绿色的地球  
Rebuild the Green Earth