

BLOWN FILM DIE SERIES

精诚时代集团

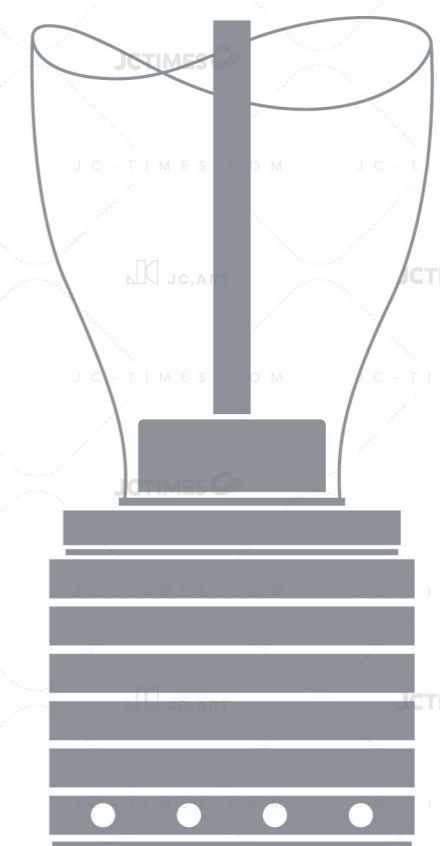
浙江精诚时代科技股份有限公司
浙江台州黄岩新前建业路88号



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吹膜系列 模头

JCTIMES GROUP

Zhejiang JCTIMES Technology Co., Ltd

NO.88, Jianye Road, Intelligent Mold Town,
Huangyan, Taizhou, Zhejiang, China

400-889-9977

From
Dreams
to
Reality

知您所需
创您所想

技术实力与创新能力

作为全球平模头行业的领军品牌,精诚时代集团深耕行业二十余年,见证并推动了中国平模头产业从无到有、从小到大、从大到强的发展历程。

建有全球最大的精密模头智能制造基地,并拥有独立的模头表面处理工厂。引入国际先进加工设备,结合全球领先的流体仿真分析技术,以技术创新为核心驱动力,致力于为全球客户提供高品质的挤出模头及配套解决方案。

在挤出模头市场占有率位居全球前列,产品远销40多个国家和地区,累计生产55000多套模头,为10000多家企业提供优质服务。全球多家500强企业均为精诚的重要客户,国内多数生产线装备企业也与精诚建立了紧密的战略合作伙伴关系。

核心产品

挤出平模头

吹膜圆模头

涂布模头

精密挤出配件

产品广泛应用于电子、汽车、建筑材料、航天航空、新能源(太阳能、动力汽车、锂电池)、医疗卫生、食品包装等领域,为客户提供全方位的解决方案。

O2 Company Profile

Technical Capabilities & Innovation

JCTIMES Group is a global leader in flat die technology, with over 20 years of industry experience. We have witnessed and contributed to the development of China's flat die industry from its beginnings to its current position as a world-class competitor.

We operate the world's largest precision die manufacturing base and have our own surface treatment facility. By combining advanced international production equipment with leading fluid simulation technology, we focus on innovation to provide high-quality extrusion dies and customized solutions for global customers.

Holds a top global market position in extrusion dies, with products exported to over 40 countries/regions. Accumulated production exceeds 55,000 die sets, serving 10,000+ enterprises with premium services. Multiple Fortune 500 companies are key accounts, while most domestic production line manufacturers maintain close strategic partnerships with the company.

Core Products

Extrusion Flat Dies
Blown Film Dies
Coating Dies
Precision Extrusion Equipment

Our products are widely used in electronics, automotive, building materials, aerospace, new energy (solar, EVs, lithium batteries), medical/healthcare, and food packaging industries, offering comprehensive solutions for customers.

O4 Blown Film Dies

Multilayer Coextiusion Blown Film Die

精诚以精工细制的严谨,持续拓宽高端吹膜模头的应用边界,
为用户提供超越期待的品质体验。

JCTimes continues to expand the application boundaries of high-end blown film die, with the rigor of
craftsmanship, providing exceeding customer expectations experience.



O6 Product Category

多层共挤吹膜模头主要类别

中心进料模头

「口模从Φ30mm-Φ3600mm」

单层 / 三层 / 五层 / 七层 / 九层

侧边进料模头

「口模从Φ30mm-Φ800mm」

单层 / 三层 / 五层 / 七层 / 九层

中心进料锥度叠加模头

「口模从Φ550mm-Φ3600mm」

五层 / 七层 / 九层 / 十一层

平面叠加模头

「口模从Φ60mm-Φ1000mm」

单层 / 三层 / 五层 / 七层 / 九层 / 十一层

- 模头钢材采用具有超高强度和韧性的优质钢材
钢材硬度: HRC 38-42
- 模头流道表面粗糙度: Ra<0.025μm
- 模头流道表面镀铬处理-镀层厚度: 0.015-0.3mm
镀层硬度: HRC 60-65
- 外模唇及内模唇圆度<0.02mm
- 模头紧固零件选用12.9级高强度螺栓
- 模头最高承受压力<60Mpa
- 模头内冷循环风管采用peek隔温材料

Main Categories of Multilayer Coextrusion Blown Film Die

Center Feed Die

Die Diameter Φ30mm-Φ3600mm

Single / Three / Five / Seven / Nine Layer

Side Feed Die

Die Diameter Φ30mm-Φ800mm

Single / Three / Five / Seven / Nine Layer

Center Feed Tapered Stacking Die

Die Diameter Φ550mm-Φ3600mm

Five / Seven / Nine / Eleven Layers

Flat Stacking Die

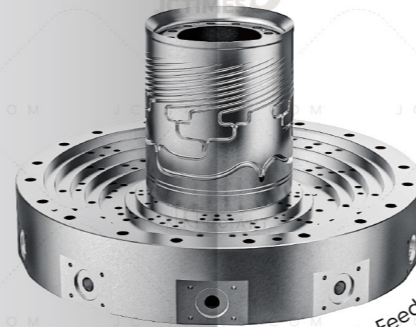
Die Diameter Φ60mm-Φ1000mm

Single / Three / Five / Seven / Nine / Eleven Layers

- The die body is made from premium steel with ultra-high strength and toughness. Steel hardness: HRC 38-42.
- Flow channel surface roughness: Ra < 0.025 μm.
- The flow channel surface is chrome-plated. Coating thickness: 0.015-0.3 mm; coating hardness: HRC 60-65.
- Roundness of the outer and inner die lips: < 0.02 mm.
- Fasteners are Grade 12.9 high-strength bolts.
- Maximum allowable pressure: < 60 MPa.
- The internal cooling air duct uses PEEK as a thermal insulation material.



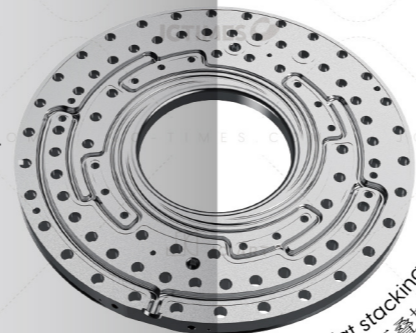
Center Feed
中心进料



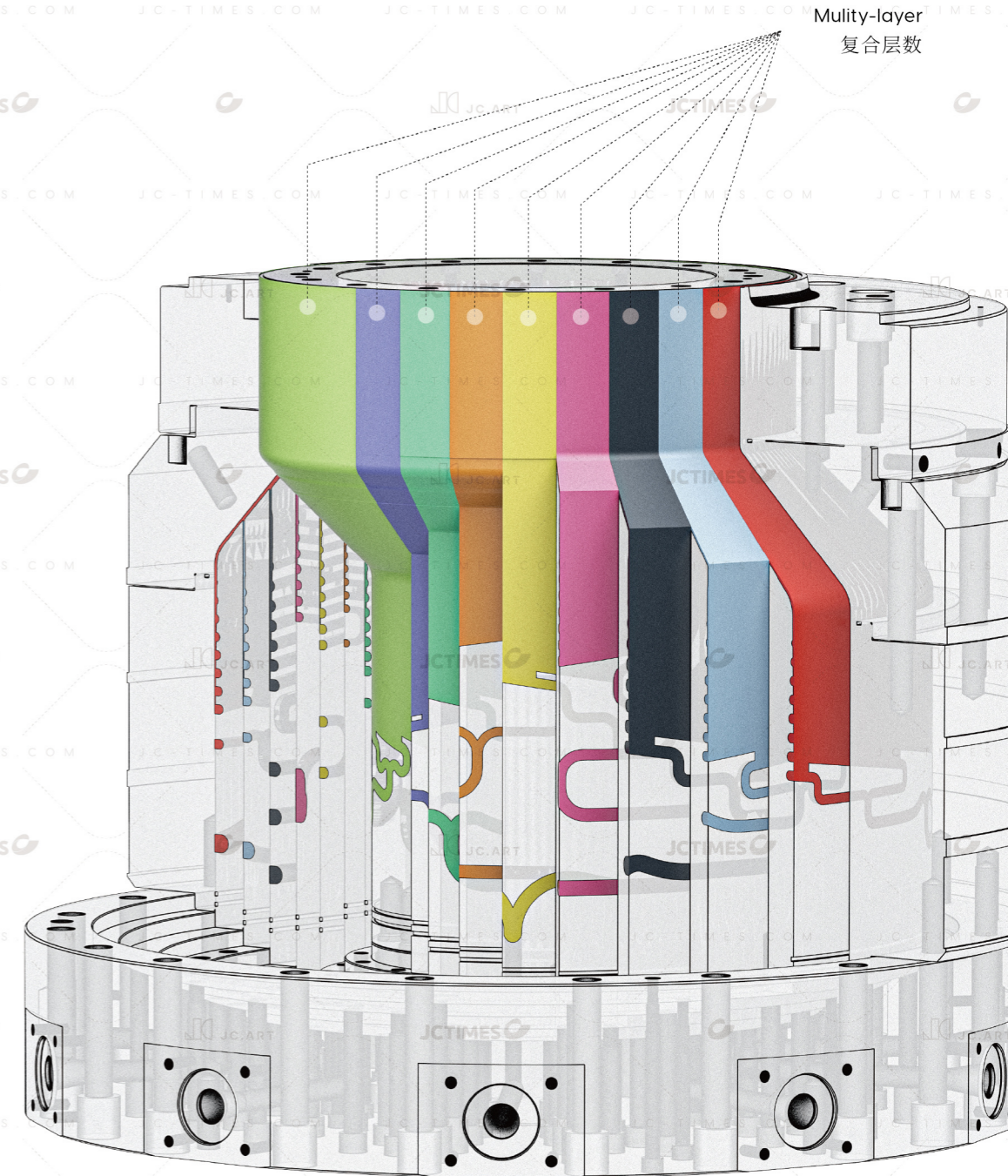
Side Feed
侧边进料



Center Feed Tapered Stacking
中心进料锥度叠加

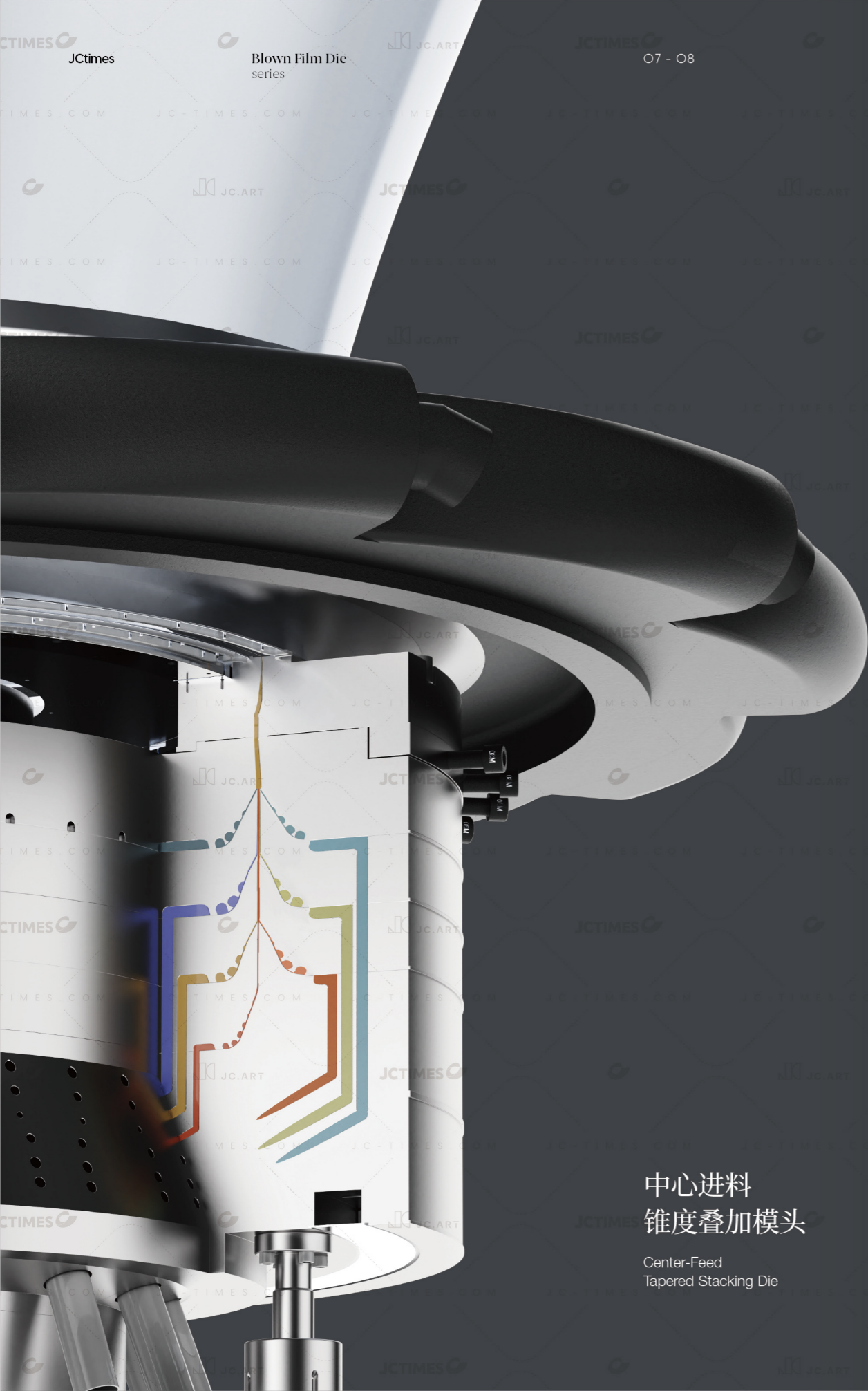


Flat stacking
平面叠加



Multy-layer
复合层数

Side-feed 9-layer coextrusion blown film die
侧边进料9层共挤吹膜模头



中心进料 锥度叠加模头

Center-Feed
Tapered Stacking Die

O8 Multilayer Coextrusion

Multilayer coextrusion in a multi-manifold die. The layers can be arbitrarily swapped, and the temperature of each layer can be controlled individually. Satisfy the high temperature difference which can effectively prevent material degradation. It is easy to process, clean and maintain.

共挤层的均匀性在6%以内

The uniformity of each layer is within 6%

6%

各层温度差异最大可达30°C

The temperature difference between layers can be up to 30°C

30°C

多层共挤

多层模内共挤复合模头, 层数可以任意组合, 每层温度可以单独控制, 满足工艺温度的高温差, 有效防止物料降解, 易于加工、清理及保养。

10 Analysis System

流道分析系统

七层Φ600mm上吹平面叠加模头



方案一

	材料	比例
A (内)	PE	15%
B	PE	15%
C	PE	15%
D	PE	15%
E	PE	15%
F	TIE	15%
G (外)	PA	10%

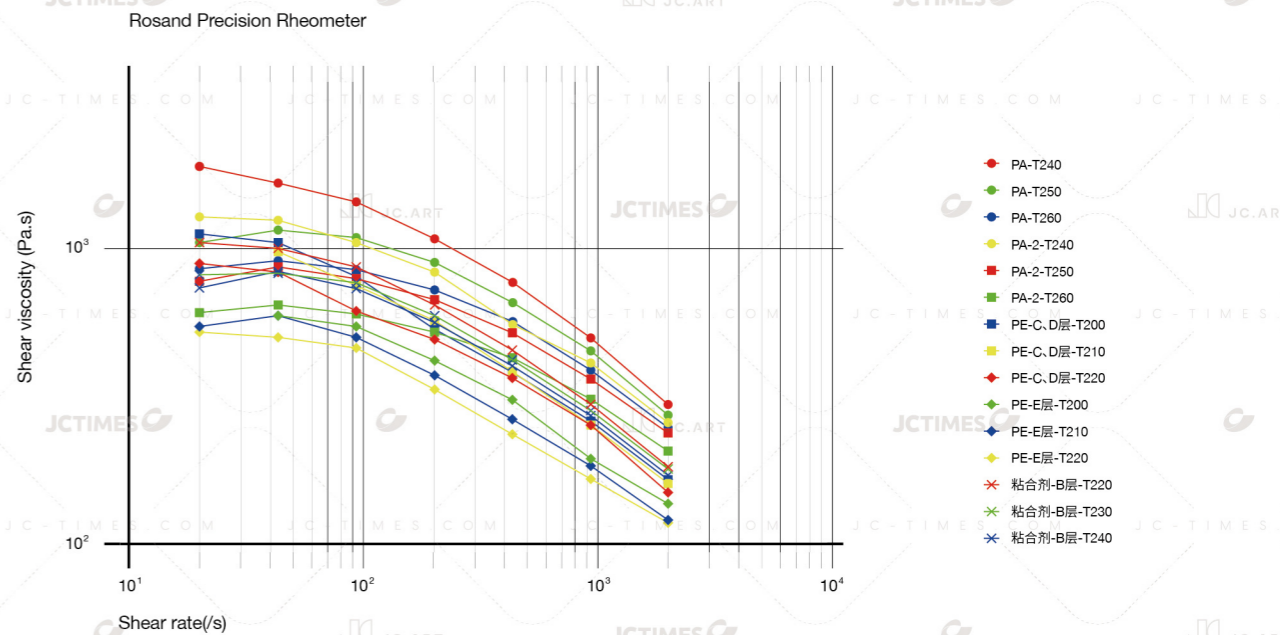
方案二

	材料	比例
A (内)	PE	15%
B	PE	15%
C	TIE	15%
D	PA	15%
E	TIE	15%
F	PE	15%
G (外)	PE	10%

产量: 650Kg/H

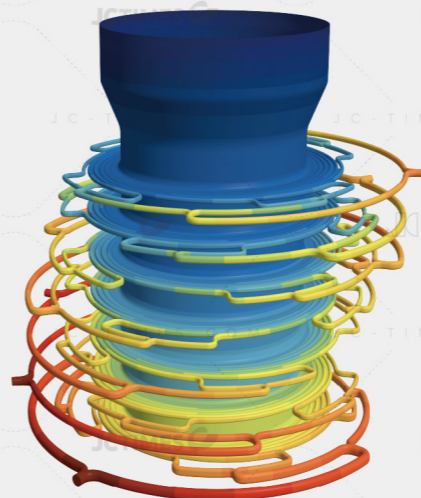
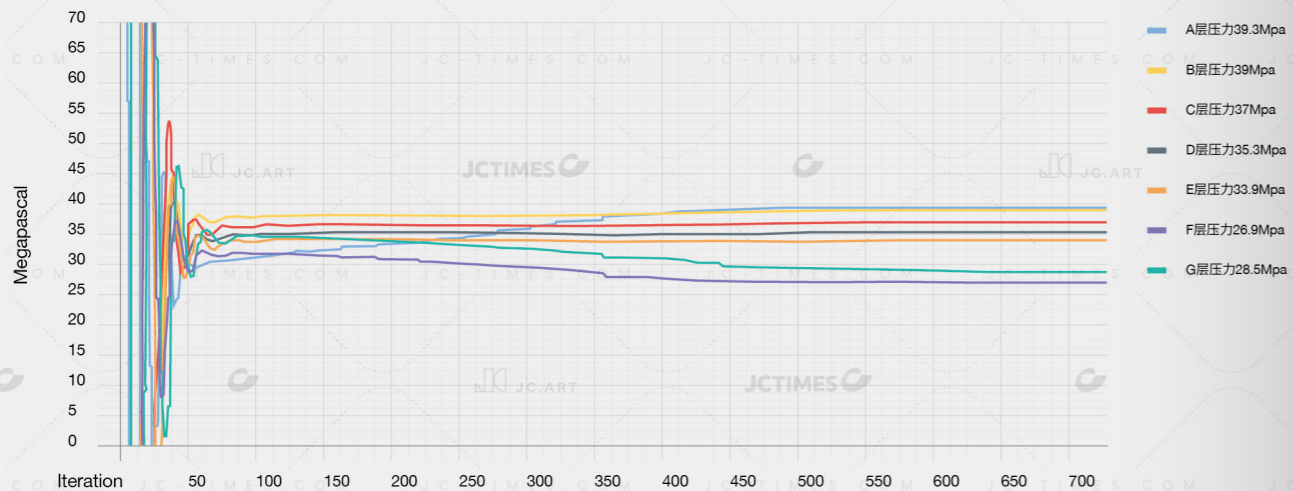
剪切速率和剪切粘度的关系曲线

The relationship between shear rate and shear viscosity



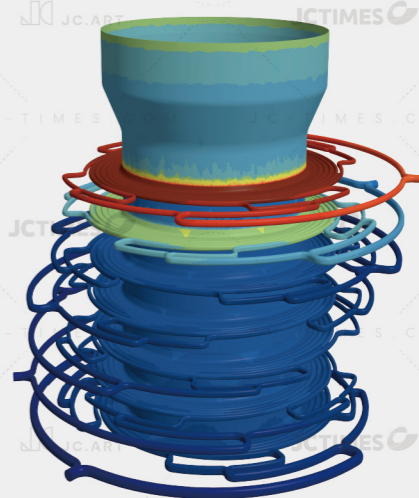
模腔压力分布图

Pressure distribution diagram of die cavity



模腔压力分布图

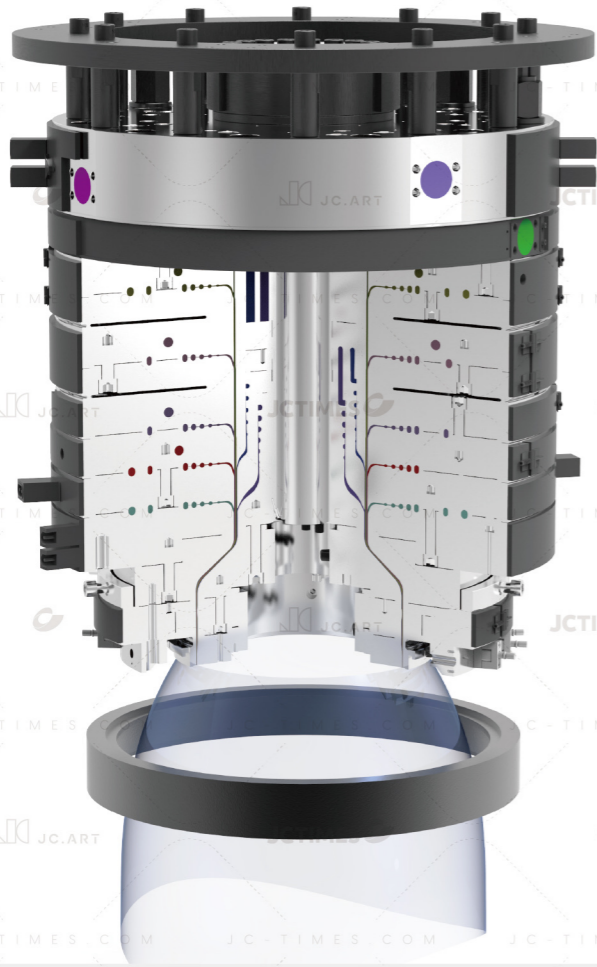
Cavity Pressure Distribution



模腔温度分布图

Cavity Temperature Distribution

九层Φ450mm下吹
(两层中心+七层平面叠加)模头



方案一

	材料	比例
A (内层)	PA	12%
B	TIE	10%
C	PE	13%
D	TIE	10%
E	PA	9%
F	EVOH	6%
G	PA	9%
H	TIE	11%
I (外)	PE	20%

产量: 500Kg/H

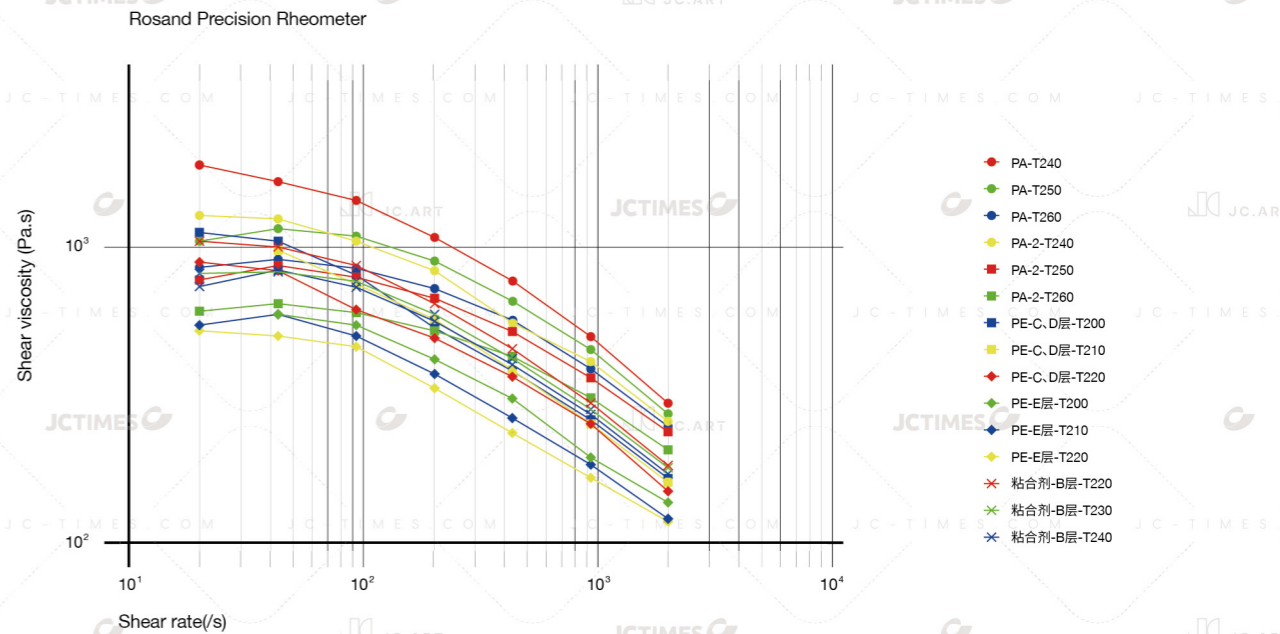
1. 模头体积紧凑
2. 柔性唇口调节装置
3. 每区隔温性能好控温精度高
4. 流道长度短熔体滞留时间短
5. 熔体剪切热少模头不易升温

12 Analysis System

流道分析系统

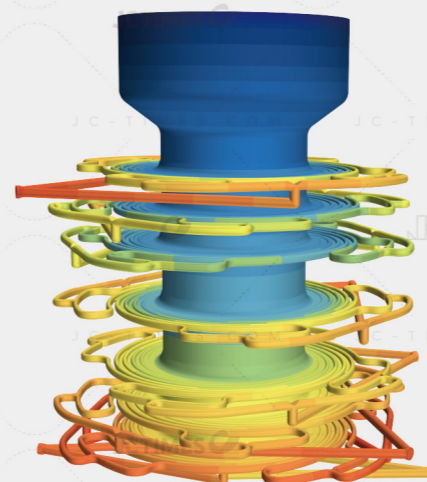
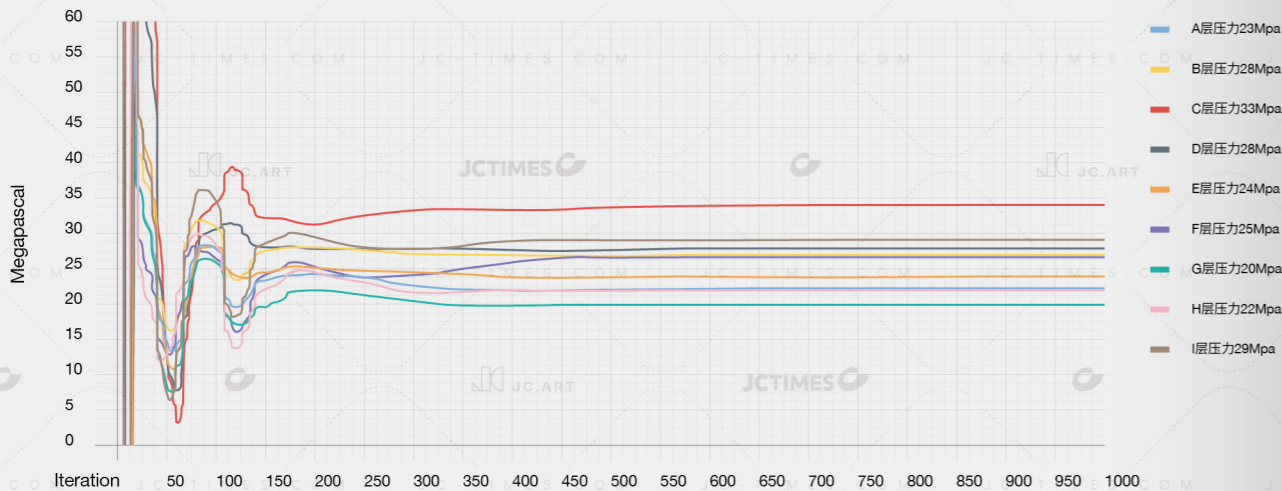
剪切速率和剪切粘度的关系曲线

The relationship between shear rate and shear viscosity

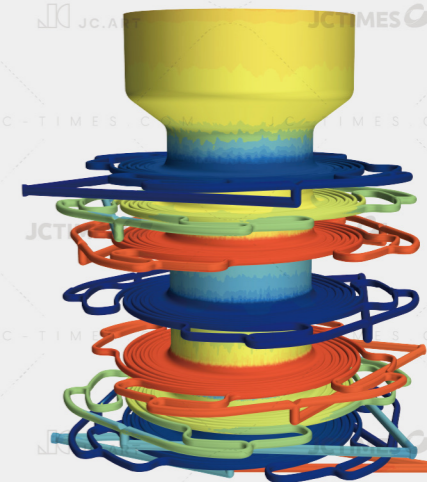


模腔压力分布图

Pressure distribution diagram of die cavity



模腔压力分布图
Cavity Pressure Distribution



模腔温度分布图
Cavity Temperature Distribution

七层 $\Phi 1500\text{mm}$ 上吹
中心进料锥度叠加模头



方案一

	材料	比例
A (内层)	PE	14.28%
B	PE	14.28%
C	PE	14.28%
D	PE	14.28%
E	PE	14.28%
F	PE	14.28%
G (外层)	PE	14.28%

产量: 1000Kg/H

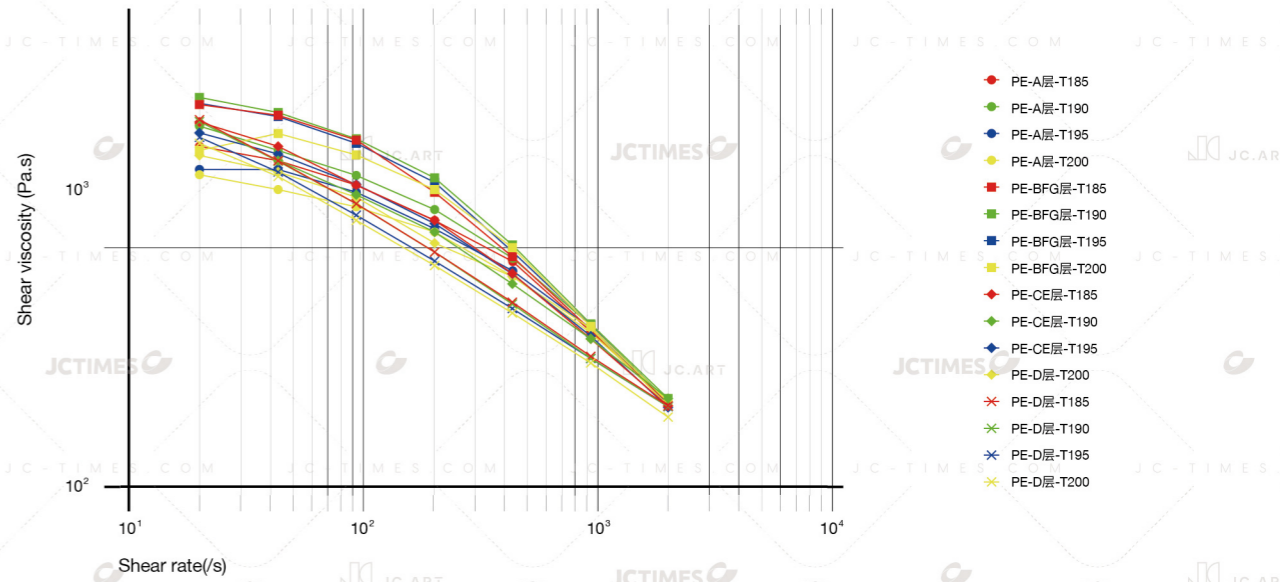
14 Analysis System

通道分析系统

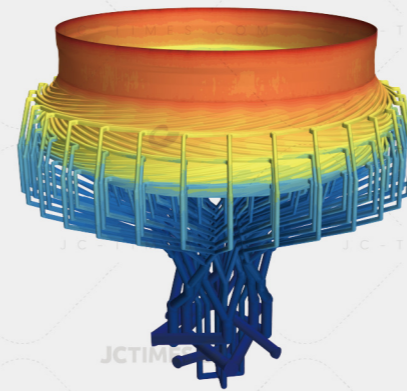
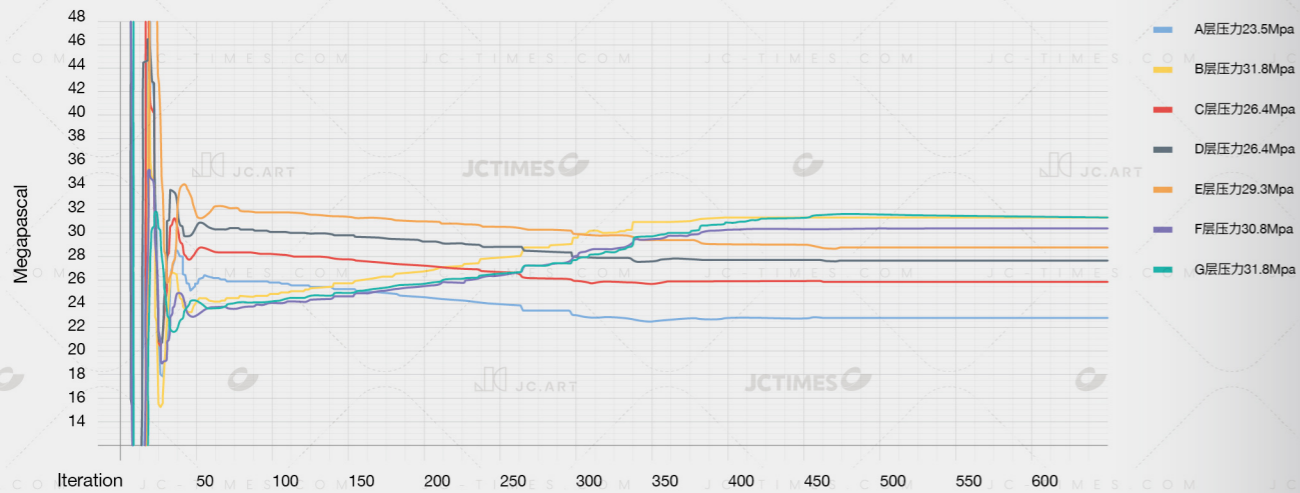
剪切速率和剪切粘度的关系曲线

The relationship between shear rate and shear viscosity

Rosand Precision Rheometer



模腔压力分布图
Pressure distribution diagram of die cavity



模腔压力分布图
Cavity Pressure Distribution



模腔温度分布图
Cavity Temperature Distribution



Precision Manufacturing

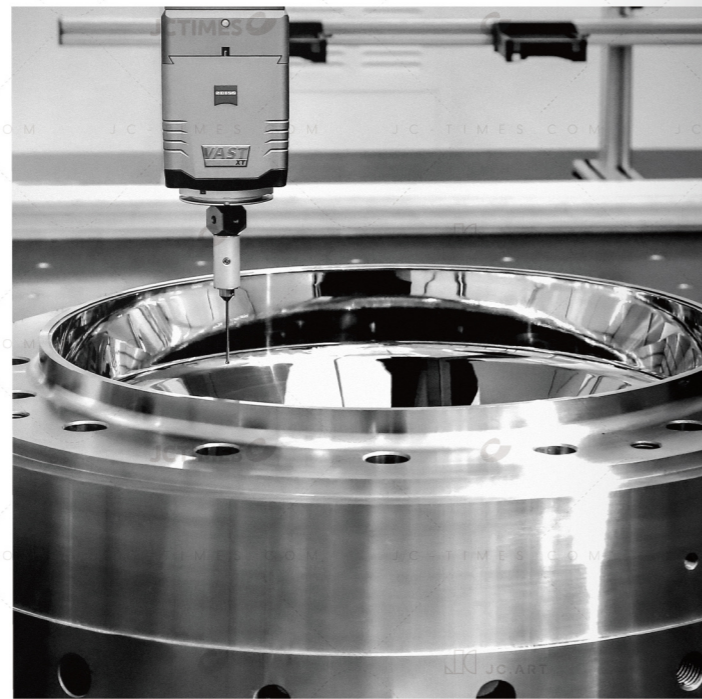
15 - 16

在恒温恒湿的智能化车间, 经过六轴高速加工中心、精密磨床等三十余道复杂工序。

确保了每一个零件加工的精确度, 满足高产能需求的同时保证了严谨的专业度。

Temperature And Humidity Controlled Workshop

Over 30 complex processes are completed on 6-axis high-speed machining centers, ensuring precision for every part and meeting high-capacity production demands with rigorous quality control.



16 Application

Multilayer coextrusion blown film offers high transparency, puncture resistance, and toughness. It is widely used in protective films, shrink films, laminated films, shopping bags, heavy-duty packaging, flexible packaging, and agricultural films.



多层共挤吹膜制品具有高透明、耐穿刺、高韧性等优点, 可作为保护膜、收缩膜、复合膜、饮料袋、购物袋等, 在重包、软包、农业等领域优势尽显。