



IPS

Preform Manufacturing Solutions 瓶坯注塑成型设备

A reliable, effective solution for TCO optimization. Sustainability and circular economy performance thanks to outstanding material management.

可靠高效总成本优化解决方案, 源自卓越的物料管理系统。可持续发展和循环经济新机械时代, 悄然来临。



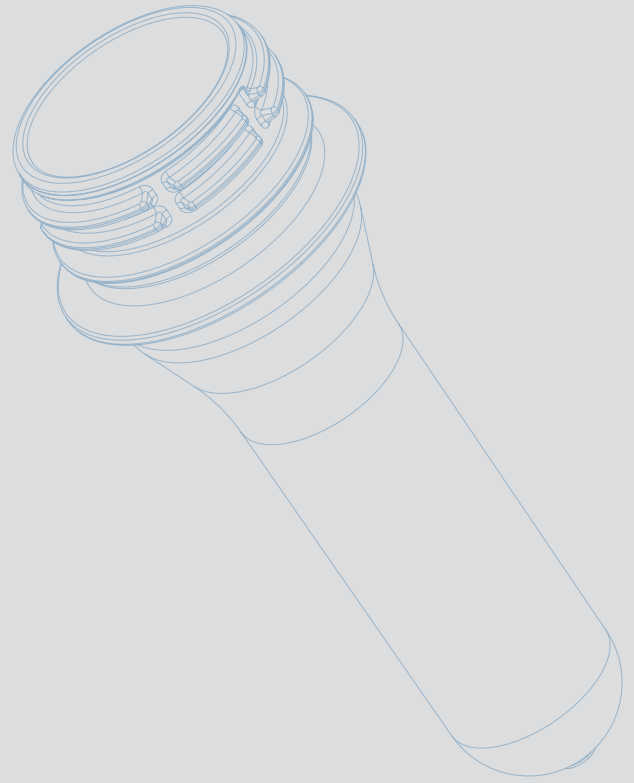
SACMI

ENDLESS INNOVATION SINCE 1919

Contents

索引

| | |
|---|----|
| PREFORM MANUFACTURING SOLUTIONS 瓶坯注塑成型解决方案 | 4 |
| SACMI LAB 萨克米研发中心 | 6 |
| IPS - INJECTION PREFORM SYSTEM IPS - 瓶坯注塑系统 | 8 |
| PREFORM QUALITY AND RESIN SAVINGS 瓶坯质量和节省原料 | 10 |
| CYCLE & ENERGY SAVINGS 循环和节能 | 12 |
| CLAMPING UNIT 2 SEC. LOCK TO LOCK 合模单元 锁模时间2秒 | 13 |
| ROBOT 机械臂 | 14 |
| MOLDS 模具 | 16 |





POST-MOLD COOLING

后冷却单元

18

QUICK MOLD CHANGE & COMPATIBILITY

模具更换快捷和兼容性

20

EASE OF USE & TROUBLESHOOTING

操作简单和故障排除系统

22

PVS PREFORM VISION SYSTEM

瓶坯视像检测设备PVS

24

IPS300

28

TECHNICAL FEATURES - 技术参数

30

YOUR MACHINE DATA

设备数据

32

TRAINING, SERVICE & SPARE PARTS

培训、服务和备件

34

ENDLESS INNOVATION SINCE 1919

百年创新始于1919

35



Preform manufacturing solutions

萨克米注塑成型解 决方案

SACMI SERVICES

- Circular Economy
- Preform Lab
- IPS - Injection Preform Systems
- PVS Preform Vision Systems
- Training, Service and Spare Parts

Circular Economy - European Union Directive 2019/04, prohibiting single-use plastics is set to revolutionize the industry by 2025. The world's main Fast-Moving Consumer Goods (FMCG) manufacturers have signed the document drawn up by the Ellen MacArthur Foundation - a leading international non-profit association that advocates the establishment of a circular economy. They are committed to reducing the amount of virgin material in packaging and increasing returnable PET quotas.

The SACMI Injection Preform System (IPS) can be used to manufacture recycled PET preforms using rPET in flake form in quantities of up to 50% and 100% in granulate.

This can be accomplished with our standard machines and hot runners, yet another revolu-

萨克米的服务

- 循环经济
- 瓶坯实验室
- 瓶坯注塑成型设备IPS
- 视像检测设备PVS
- 培训、服务和备件

循环经济 - 一次性塑料欧盟法令于2019年4月正式颁布，对一次性塑料说不将为整个塑料行业带来变革，此项计划预计至2025年完全解决一次性塑料问题。艾伦麦克阿瑟基金会(Ellen MacArthur Foundation)是一家以发展和倡导循环经济为主的非赢利协会，该基金会起草并向全球包装领域发出关于减少一次性塑料的使用和推广可回收PET原料的请愿书已由多家制造商签署。

萨克米致力于在包装领域减少新料的使用，推行采用可回收PET树脂原料解决方案。萨克米瓶坯注塑成型设备IPS适用于100%PET再生树脂原料，也适用50%片状PET再生树脂原料。

标准型瓶坯注塑成型设备和普通版热流道均适用于100%PET和50%片状再生树脂原料。全新应



tion for an industry that until now, was almost exclusively focused on light weighting.

PET (100% recyclable) is becoming pivotal to the plastics industry on account of intrinsic advantages with respect to other plastic materials. These include, both re-usability and versatility that makes it suitable for all kinds of industrial packaging.

SACMI has set itself the goal of giving PET a 'second life' via the use of recycled resins and/or by aiding full re-use of the material as per circular economy principles.

用不仅使瓶坯生产设备更符合市场需要也为生产厂商提供产品轻量化解决方案。

与其它塑料相比，PET在塑料行业内至关重要，除百分百可回收之外，其灵活性能在包装行业内深受好评。

可回收和再生原料的充分利用不仅有利于循环经济良性发展，也使PET原料在饮料包装市场上发挥举足轻重的作用。

SACMI Lab

SACMI PROVIDES ALL-ROUND ASSISTANCE SERVICES, FROM CLOSE SUPPORT DURING DEFINITION OF PACKAGING DESIGN CRITERIA TO MOLD-MAKING, FROM COMPLETE PLANTS TO QUALITY CONTROL DEVICES.

PREFORM - LAB SERVICES

- Preform - Design and Light Weighting
- Bottle Design
- Sampling, Preforms and Bottles
- Resin Material Testing

Your package design is critical to your success. Our Lab services offer a full range of preform and bottle design services preserving the integrity of the beverage. Taking into consideration the environment, having a lightweight preform with bottle integrity with the lowest part cost is critical to success.

Our lab draws on decades of experience and is equipped with cutting-edge material, which includes testing equipment, calculation tools and production simulation hardware. The lab is certified to meet the highest quality that global brands expect, allowing us to handle the most difficult of challenges.

All project work is performed with the utmost confidentiality. You can count on SACMI as your sole provider of all the technologies involved in the beverage production process.

萨克米研发中心

从设计到制模，从生产线解决方案到产品质量控制，萨克米提供全方位的个性化定制式服务。

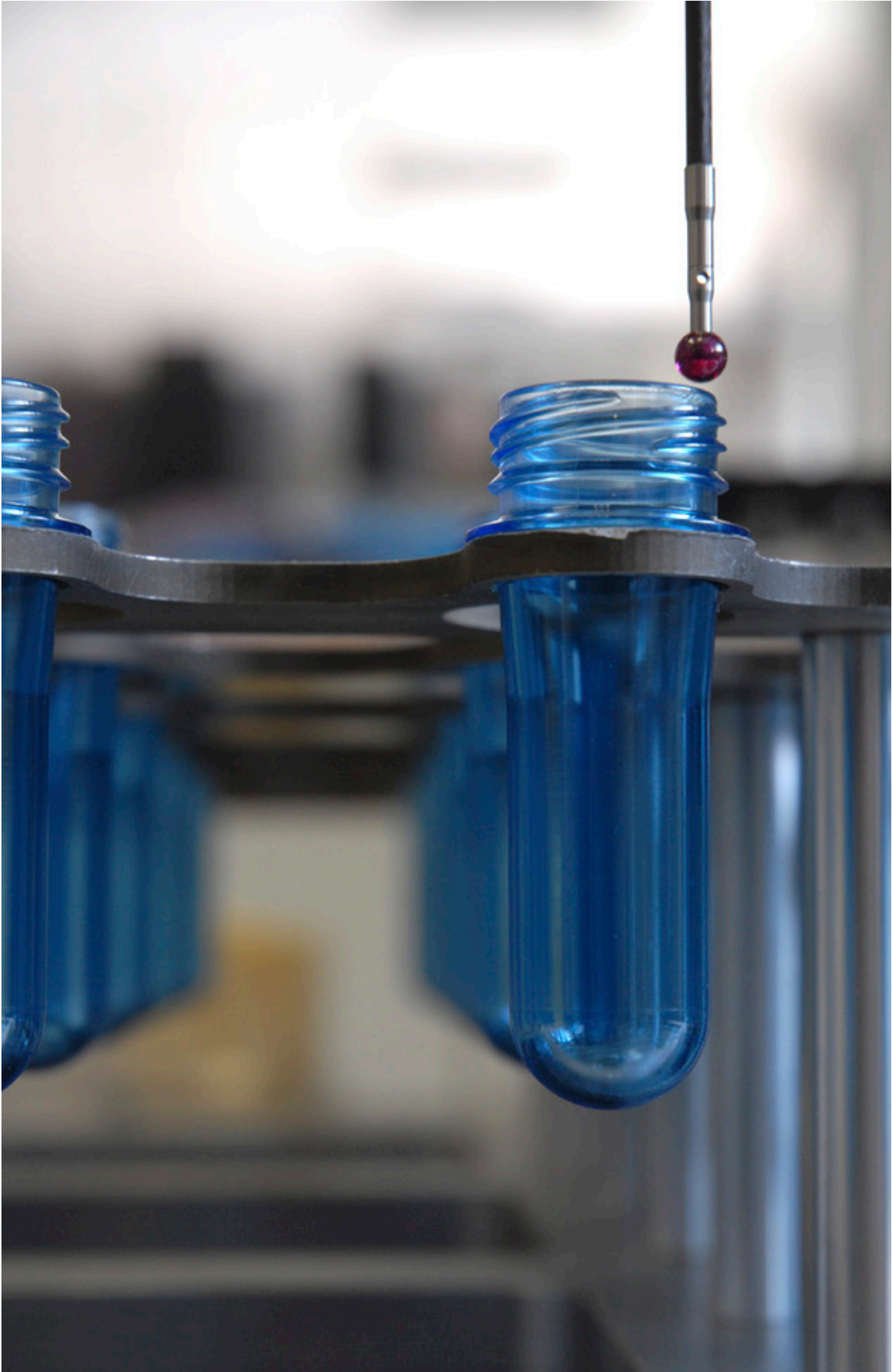
瓶坯 – 实验室的服务

- 瓶坯 – 设计和轻量化
- 容器设计
- 取样，瓶坯和容器
- 原料测试

包装设计至关重要。萨克米研发中心为用户提供全方位的瓶坯和容器解决方案，最大程度确保饮料包装的完整性。从环境角度考量，以较低的零件成本与轻量化瓶坯相结合为用户提供更大投资回报率，性价比更高。

萨克米实验室专注于容器研发，采用尖端实验设备测试原料，评估模具，生产模拟，积累了几十年丰富经验。与客户紧密合作，为减少原料重量和降低成本不断努力。

保持创新，独家设计，满足客户需要同时，使产品更具说服力，及时有效应对竞争激烈的饮料市场。



IPS

Injection Preform System

THIS TRIED AND TESTED SACMI PLATFORM WITH INJECTION TECHNOLOGY ALLOWS PREFORMS TO BE MANUFACTURED WITH EVER-MORE SUSTAINABLE PROCESSES AND MATERIALS.

IPS BENEFITS

- Business case review
- Comprehensive & intergraded manufacturing solutions
- Quality preforms with resin savings
- Fast cycle times
- Energy savings
- Quick mold change & compatibility
- Ease of use and troubleshooting

At SACMI we understand that choosing the right business partner is a difficult decision. We put our customer's interest first, allowing us to help you with the best business solution. We provide industry knowledge in application design and state-of-the-art solutions with flexibility to use 100% rPET or up to 50% flake. SACMI offers a reliable range of preform systems spanning from the 16-cavity IPS 220 ton to the 128-cav-

IPS

瓶坯注塑系统IPS

萨克米瓶坯注塑成型设备经优化和改良，不仅完全适用于可回收材料，在整个加工过程中更有利于可持续生产和循环经济的发展。

瓶坯注塑系统优势

- 案例回顾
- 瓶坯生产解决方案
- 品质上乘
- 循环时间短
- 节能
- 模具更换快捷和兼容
- 操作简单和故障排除系统

萨克米秉承客户至上，不断进取的服务理念，根据市场需求，为目标用户量身打造专属方案。萨克米先进生产技术和卓越机械制造高效可靠，能灵活应用于100%PET再生树脂原料和50%片状再生树脂原料。选择恰当准确的合作伙伴实属不易，尖端设计和产品应用能有效减少零部件成本，从而增加投资回报率。萨克米瓶坯注塑成型设备涵盖从16腔IPS220到128腔IPS400等机型。



ity IPS 400 ton machine. Selecting the right application design and platform allows us to help you determine lowest part cost, resulting in the best return on investment.

Our company is built on a foundation of over one hundred years of continuous innovation backed by scientific principles and use of the finite elements method (FEM).

Our customers can count on us to help them succeed.

萨克米采用有限元结构分析方法，优化机械惯性和确保机械应力受阻性能优越。

萨克米，创新进取，值得信赖。

Preform quality and resin savings

QUALITY, PERFORMANCE,
SUSTAINABILITY: FEATURES THAT
MAKE THE INJECTION PREFORM
SYSTEM UNIQUE COMPARED
TO OTHER TECHNOLOGIES.

SACMI's comprehensive manufacturing work cells are fully integrated, allowing control of the machine, robot, dryers, chillers, dehumidifiers and preform soft drop. This is managed through a user-friendly machine and Human Machine Interface (HMI). Our simple-to-use HMI eliminates the need for highly skilled workers and reduces the risk of errors. This delivers perfect process control with shot to shot repeatability for quality preforms at maximum overall equipment effectiveness (OEE).

Preform Quality with Resin Saving – SACMI systems deliver industry leading preform quality based on market and manufacturer's needs, resulting in the lowest part cost.

We can achieve precise preform dimensions with our in-house manufacturing, using state-

瓶坯质量和节省原料

高效、优质、可持续性是全新瓶坯注塑成型设备的特点

萨克米瓶坯注塑成型生产线包括瓶坯注塑成型设备、机械臂、干燥机、冷却机、除湿机和软着陆装置。人机界面操作简单，仅需普通操作人员即可完成对生产加工的管理和控制。

萨克米注塑瓶坯成型设备全自动加工控制，有效提高生产效率和设备整体有效性(OEE)，从而达到产品高度重复并连续生产，为产品品质提供保障。

节省原料 – 根据市场和用户不同需要，萨克米量身打造个性化定制式解决方案，并降低零部件的成本。

先进的生产技术和ISO质量认证确保瓶坯生产的安全可靠。高效瓶坯注塑成型设备采用可回收



of-the-art equipment and processes that are ISO certified. Resin savings are delivered not only via the use of rPET and well designed preforms, but also by SACMI's ability to provide precise shot to shot repeatability of preforms. This is achieved by thermally conditioning the PET using our high-performance injection unit, balanced hot runner, and uniform mold cooling.

With the IPS system integrated with the SACMI Preform Vision System (PVS), we can inspect 100% of production in-line at speeds of up to 70,000 pph. This allows production of quality preforms with minimized scrap.

PET树脂原料，配有温控装置和热流道，在持续生产中确保产品的一致性，瓶坯均匀统一。

萨克米瓶坯视像检测设备PVS可以监督和管理产品质量，生产速度可达每小时70,000个瓶坯。在生产过程中，减少废料的同时，确保产品质量。

Cycle & Energy Savings

SACMI SYSTEMS ARE UNIQUELY DESIGNED WITH EVERY COMPONENT IN MIND. OUR SYSTEMS WORK COLLECTIVELY AND ARE CONTROLLED FROM ONE SIMPLE-TO-USE HMI TO ENSURE QUALITY, OPTIMAL CYCLES AND ENERGY SAVINGS.

The SACMI Injection unit is built to deliver a homogenized melt with low Acetaldehyde (AA). This melt, delivered by our extruder, has an electrical-drive for the plasticizing screw and a shooting pot controlled by high quality components. This solution also ensures industry-leading high performance and energy savings. With our standard injection unit, it is possible to produce preforms with recycled material.

循环和节能

每个组件的独特设计共同发挥协同作用，人机界面(HMI)管理和控制，优化生产循环、节能和确保产品质量。

萨克米注塑单元用于输送含有低乙醛(AA)的均质熔体。挤出机配有塑化螺杆和注射枪。萨克米瓶坯注塑成型设备适用于可回收树脂原料，高效节能。



PLASTIFICATION AND INJECTION UNIT
State-of-the-art solution for wide range of PET resins including rPET with up to 50% flakes

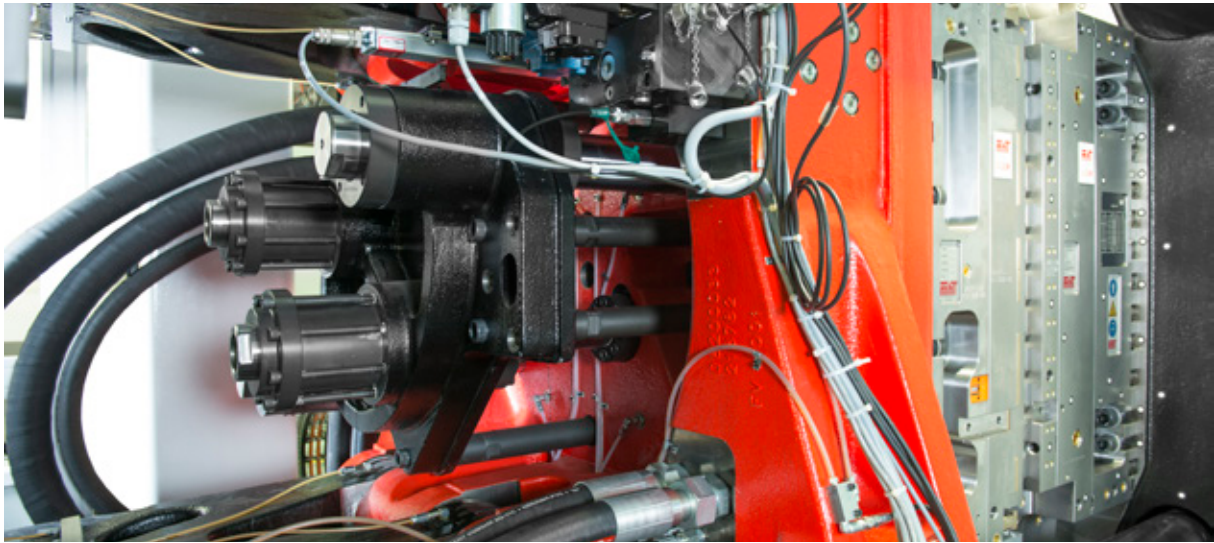
塑化和注塑单元
可靠高效的塑化和注塑单元适用于可回收树脂原料和50%片状再生树脂原料。

*Injection Unit Delivering:
High Performance and Energy Savings*

*注塑单元:
高效节能*

Clamping unit 2 Sec. Lock to lock

合模单元 锁模时间2秒



Clamping Unit – The toggle system and moving platen have been designed using FEM structural analysis. This optimizes mechanical inertia and ensures excellent resistance to mechanical stress. On the 220-ton machine the preform stripper plate is controlled by two hydraulic cylinders: one for preform release, the other for extraction.

This solution optimizes the ejecting force, ensuring significant energy savings. On the 400-ton machine ejection is once again a two-stage process: release by way of boosters that are sunk into the moving platen and ejection by bars guided by 2 cylinders located in the rear of the moving platen. All hydraulic actuators are equipped with customized digital servo-valves located in the immediate vicinity. This guarantees ultra-fast lock-to-lock times, thus reducing the preform cycle time.

合模单元 -采用有限元结构分析方法，优化机械惯性和确保机械应力受阻性能优越，曲轴单元与动模板组成合模单元。220型瓶坯注塑系统的脱坯盘由两个液压气缸驱动，一个用于开模，另一个用于抓取瓶坯，其优点在于优化脱模力，节能效果显著。400型则是采用两步法完成，经助推器下降至推板，推板后方的两个气缸控制并执行脱坯。所有液压驱动都由邻近的数码伺服阀控制，减少注塑周期，降低瓶坯循环时间。

Robot

SPEED, CONTROL AND RELIABILITY. THE POST-MOLD COOLING UNIT IS FULLY INTEGRATED WITH THE MACHINE AND CONSISTS OF UP TO 4 PREFORM COOLING STATIONS.

The take-out robot is driven by the latest-generation belt-free technology.

The linear motors ensure speed, accuracy and repeatability of robot movements and are maintenance-free.

To save energy, a braking energy recovery system (K.E.R.S.) has been implemented, which works during deceleration of the motors.

On the 220-ton machine, the preforms are unloaded by the placer onto traditional T belts (also integrated on the HMI). On the 400-ton machine, instead, two preform containers (octabins) are positioned inside the machine enclosure and the placer releases the preforms directly inside them.

机械臂

高速、控制和可靠。后冷却单元与设备完美整合，由多达4个瓶坯冷却站组成。

抓坯机械手由高性能线性马达驱动，以确保机器运动高精度，高速度，与稳定性。

能源回收系统(K.E.R.S.)在马达减速时开始运行。

IPS220设备上，瓶坯输出至传统T型皮带上（皮带与机器整合），而IPS400设备，存放区域经内部定位，瓶坯直接被输出。



We have designed our systems with practical operational needs.

To simplify preform collection for review, the system is equipped with a preform sampling system that is activated by the machine operator as required. The IPS robot also gives you the flexibility to run other OEM Take Off Plates with minimum compatibility components.

萨克米根据实际需要设计我们的机械系统。简化了取坯装置，并配有取样单元，操作人员根据生产情况进行取样。萨克米瓶坯注塑成型设备具有高度灵活性，可以与其他生产厂家的取坯板兼容。

Molds

WITH 30 YEARS OF EXPERIENCE AND IN-HOUSE MANUFACTURING OF OVER 15,000 STACKS A YEAR, SACMI IS THE WORLD'S LEADING PRODUCER OF MOLDS FOR THE BEVERAGE INDUSTRY.

Product design, mold development and comprehensive testing on SACMI machines ensure an all-round service of unrivalled quality. SACMI molds begin their lives with precision in-house design of each individual component.

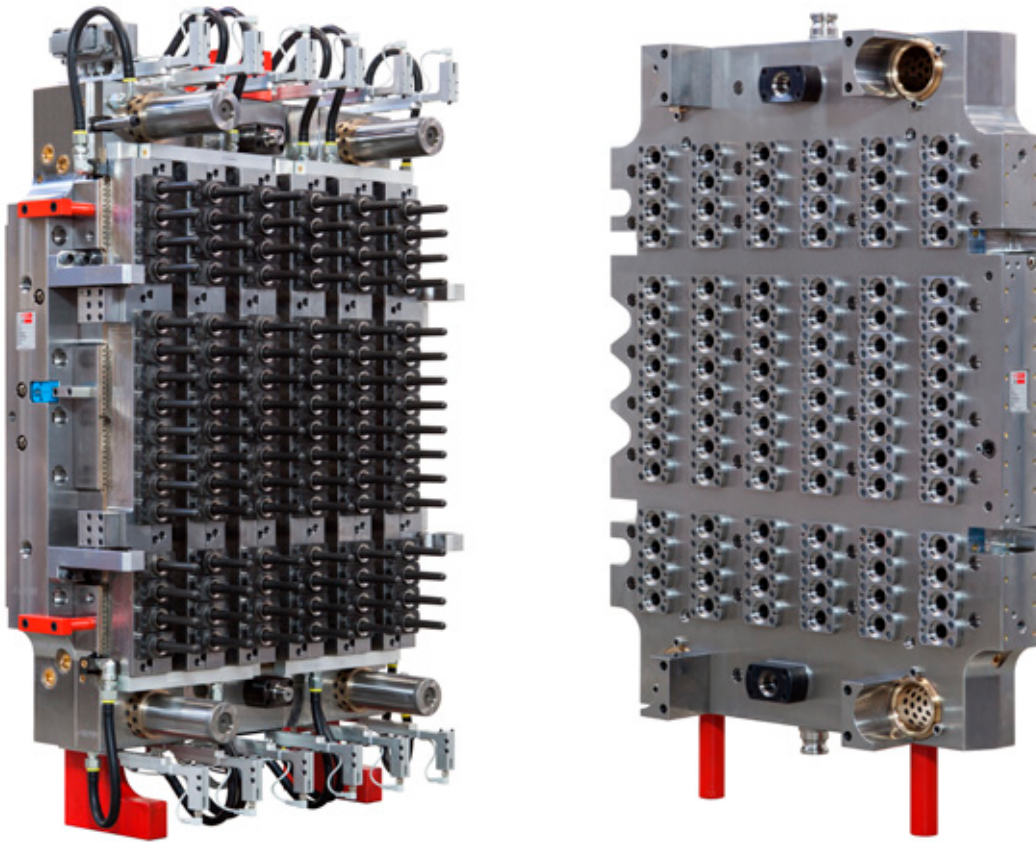
The design process is as innovative as it is sophisticated. Meticulous care goes into every aspect of design especially the SACMI-developed hot runners. It has optimized melt flow that minimizes both the energy required by the heater elements, thus reducing power consumption. This also reduces the PET degradation that can generate acetaldehyde. High-efficiency cooling circuits for the stainless-steel stacks ensure outstanding uniform heat exchange efficiency, resulting in particularly high-quality preforms and fast production cycles. SACMI's mold manufacturing department

模具

超过30年生产经验，每年生产15,000个模腔，在饮料行业，萨克米模具生产技术全球领先。

从产品设计到模具研发，再到模具测试，萨克米为客户提供优质高效的服务。

萨克米模具设计之初就运用创新、精湛的工艺设计每个部件。萨克米秉持一丝不苟的设计理念来为每个部件进行设计，通过优化流速将热能量的供应降至最低，从而减少功率消耗、PET降解和乙醛的产生。高效冷却回路实现高水平的热交换效率，从而带来高性能的生产循环。



produces thousands of preform and closure stacks each year. It does so by using only the highest quality materials, carrying out precision machining and running computerized checks on the entire production cycle.

SACMI molds have been designed to minimize maintenance-related downtimes and simplify the process. For this reason, we have incorporated replaceable tapers and self-lubricating mold wear components, keeping your operational cost to a minimum.

萨克米模具生产部门每年生产上千件注塑和压塑模具，只使用最好质量的材料，而且在整个生产循环过程中，进行高精度制作打磨，采用计算机化的检测程序。

萨克米模具的设计旨在最大限度的减少因维护导致的停机时间，并简化过程。因此，我们将脱模板和自润滑模具整合，将操作成本降到最低。

Post-mold cooling

PREFORM QUALITY,
UNIFORM COOLING, RELIABLE
PART TRANSFER

SACMI product handling systems - comprised of Take Off Plate (TOP) and placer - provide uniform preform cooling. This cooling is delivered via our take off tubes that are anodized to ensure longevity by resisting corrosion.

The TOP is intergraded with the SACMI robot and controlled through the machine HMI. This integration also simplifies product changes.

Two reliable solutions are available to remove preforms from the TOP:

Vacuum cups or pneumatic grippers with food-grade silicon seals. The system eliminates the risks associated with the handling of warm preforms.

后冷却单元

瓶坯质量优异，冷却均匀，部件更换快速可靠

萨克米产品处理系统由脱坯板(TOP)和瓶坯置入装置组成，可提供均匀的瓶坯冷却。这种冷却通过阳极氧化的取坯管传递，因其抗腐蚀性使得使用寿命延长。

脱坯板与萨克米机械臂结合，通过人机界面(HMI)进行控制。此种结合简化了产品更换。

有两种可靠的解决方案可以从取坯板中移除瓶坯：

真空盘或者食品级硅密封的气动夹爪，该系统消除了处理已加热瓶坯的风险。



Quick mold change & compatibility

At SACMI, we understand that production demands change, and you need the flexibility to use all assets. Therefore, we have introduced quick mold change, which allows you to change between preforms very quickly. Our molds and machines are also designed to give you the flexibility to run SACMI molds in other OEM machines. Also, our machines have the flexibility to run other OEM molds.

The 220-ton machine features a hydraulic/pneumatic mold mounting system.

This system is integrated in the fixed and moving platens. Our automatic mold purge system ensures that cooling lines are drained to minimize leaks during disassembly and ensure proper mold storage.

Our molds are designed as plug and play systems, making mold changeovers simple, quick and safe.

模具更换快捷和兼容性

制造商需要高度的灵活性以应对变化的生产需求。因此，萨克米的模具可以做到快速更换，即可以允许用户非常快速的更换瓶坯类型。我们的模具和机器灵活性极高，可与市场上现有注塑设备兼容。此外，萨克米瓶坯注塑设备也可与其他品牌的模具兼容。

萨克米瓶坯注塑成型设备IPS220具有液压/气动模具安装系统。

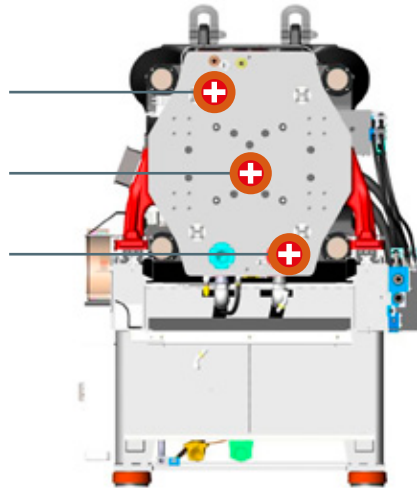
定板和动板高度整合，配有自动清洗系统确保冷却管道的排水，最大限度的减少拆卸过程中的泄漏，并确保模具被妥善放置。

采用即插即用设计，模具更换简单、快速、安全。

Patented Quick Lock system
快速锁模系统专利

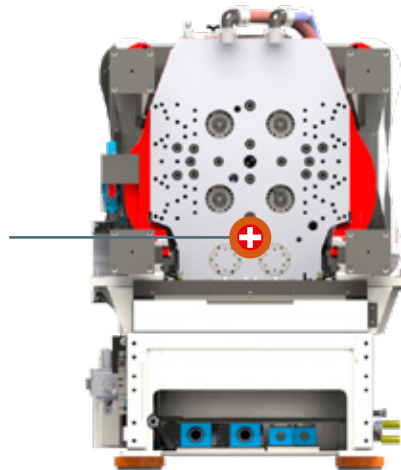
Fastest mold changeover on the market
模具更换迅速快捷

Integrated water & air connections
集成水和空气连接



IPS 220

Compatibility with most
existing molds
与大多数现有模具兼容



IPS 300

Compatibility with most
existing molds
与大多数现有模具兼容



IPS 400

Ease of use & Troubleshooting

操作简单和故障排除系统

HUMAN MACHINE INTERFACE (HMI)

人机界面(HMI)

Special SACMI-developed preform production software renders the user interface extremely simple.

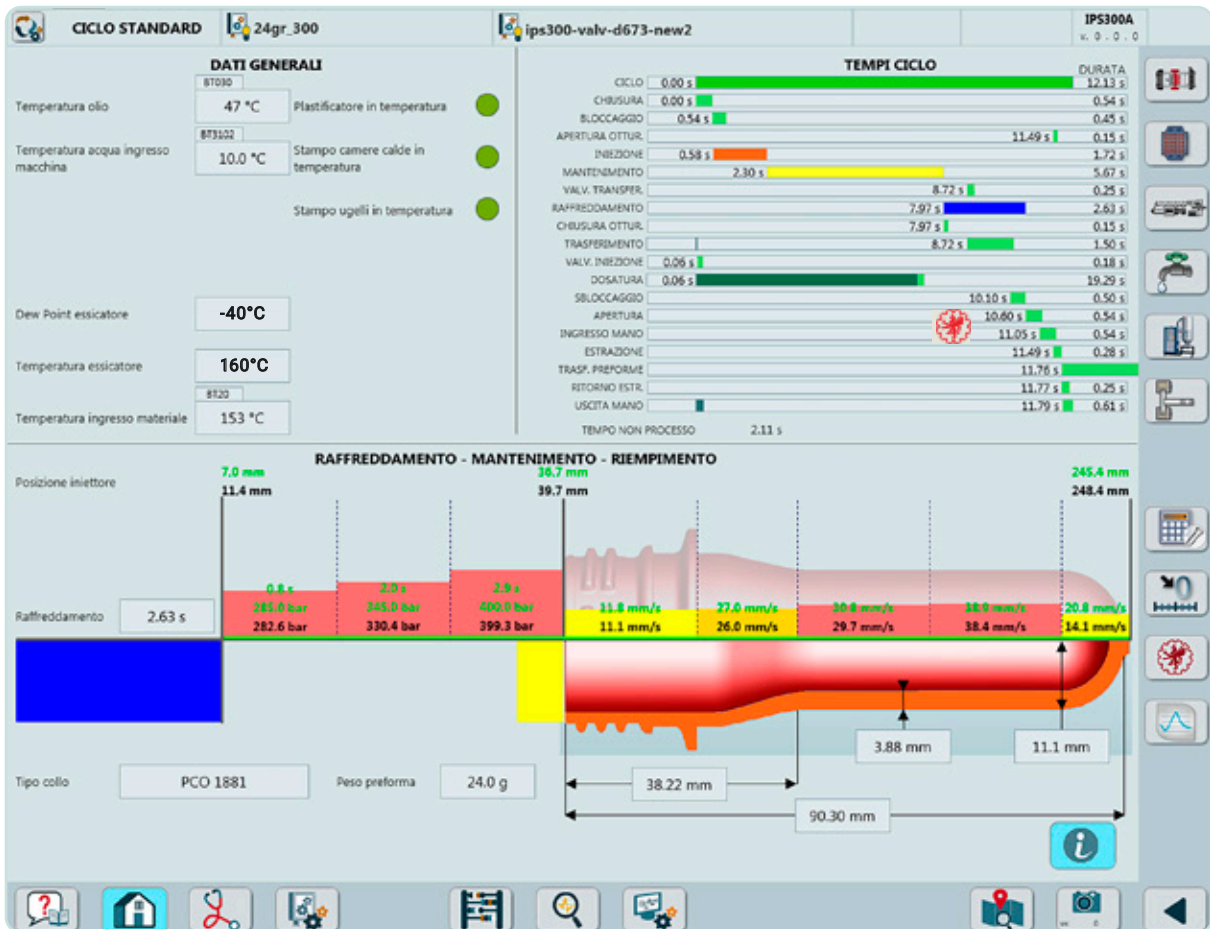
萨克米研发的PET瓶坯生产软件使人机操作界面易于操作。

This allows the operator to configure the machine simply by entering preform dimensions or selecting an existing preform from the HMI.

操作人员通过输入瓶坯尺寸或在人机界面(HMI)上选择现有瓶坯进行设置。

This user-friendly HMI allows easy parameter settings, with the advantage that the machine no longer needs to be run by a highly specialized worker. All auxiliary systems are controlled via the HMI.

人机界面的优势是无需由高级别的工作人员进行操作。所有辅助装置均通过人机界面(HMI)进行控制。



Having one central control area means the technicians do not have to move from one device to another to make changes and do not have to learn multiple operating systems (HMI). This reduces the chance of human error giving you peace of mind so that you can focus on other business matters.

拥有一个中央控制区域意味着技术人员无需从一个设备移动到另外一个设备进行修改设置，也无需学习另一种操作系统(HMI)。

这减少了人为错误，让您安心专注于其他事务。

PVS Preform Vision System

PUTTING PREFORM QUALITY FIRST

With over 50 years of experience in designing machines and systems for the packaging industry, SACMI has developed proprietary technology for each stage of production, from molding to quality/process control systems that ensure 100% inspection of every single preform. The SACMI Computer Vision department has developed preform inspection machines that meet each individual customer's specific needs. Continuous research into new technology and heavy investment makes SACMI Computer Vision the leading provider of high-end solutions which combine external preform inspection with internal PET quality control systems that use polarized light and advanced artificial intelligence (AI) algorithms.

视像检测设备PVS

质量为先

萨克米在包装行业拥有超过50年的机器和系统设计经验，从模具到控制系统，萨克米为每个生产阶段都开发了专有技术，以确保100%的瓶坯检测。萨克米视像检测部门已经开发出满足每个客户特定需求的瓶坯检测设备。对新技术的不断研究和大量投资，结合瓶坯检测和内部PET质量控制系统，并采用偏振光检测技术和先进的人工智能算法，使萨克米检测部门成为高端解决方案供应商。



INSPECTION OF TOP SEAL 检测顶部密封

- Short Shots · 缺料
- Ovalizations · 椭圆
- Diameters · 直径
- Flashes · 飞边
- Contaminations · 污染

INSPECTION OF FINISH

- Contaminations
- Flashes
- Lack of materials

坯口检测

- 污染
- 飞边
- 缺料

INSPECTION OF BODY

- Inclusions
- Black dots
- Opacity
- Crystallization
- Bubbles
- Thermal degradation
- Mold dents
- Water marks
- Long gate
- Side wall deformations
- Color deviation and inconsistency
- Shape

坯身检测

- 杂物
- 黑点
- 不透明
- 结晶化
- 气泡
- 热降解
- 压痕
- 水痕
- 长尾
- 侧壁变形
- 色差和不均匀
- 坯身变形

INSPECTION OF BOTTOM

- Crystallization
- Pinhole
- Inclusions
- Off-center gates
- Bubbles
- Unmelted resin
- Black dots

坯底检测

- 结晶化
- 小孔
- 杂物
- 注塑口偏移
- 气泡
- 树脂未融化
- 黑点

INSPECTION OF BODY 坯身检测

- Orange peel · 橘型褶皱
- Scratches · 刮痕
- Pinches · 绞纹
- Deep water marks · 深度水纹
- Surface deformations · 表面变形
- Shrinkages · 缩孔
- Semi-transparent crystallization · 半透明结晶化
- Mold marks · 模具痕迹



SACMI vision systems feature the CVSWEB module, which allows Vision System data to be displayed through the WEB.

A wealth of information - counters, alarms, machine status and much more - can be displayed remotely, without having to be in front of the equipment. Information can be displayed on any computer or mobile device authorized to connect to your company network.

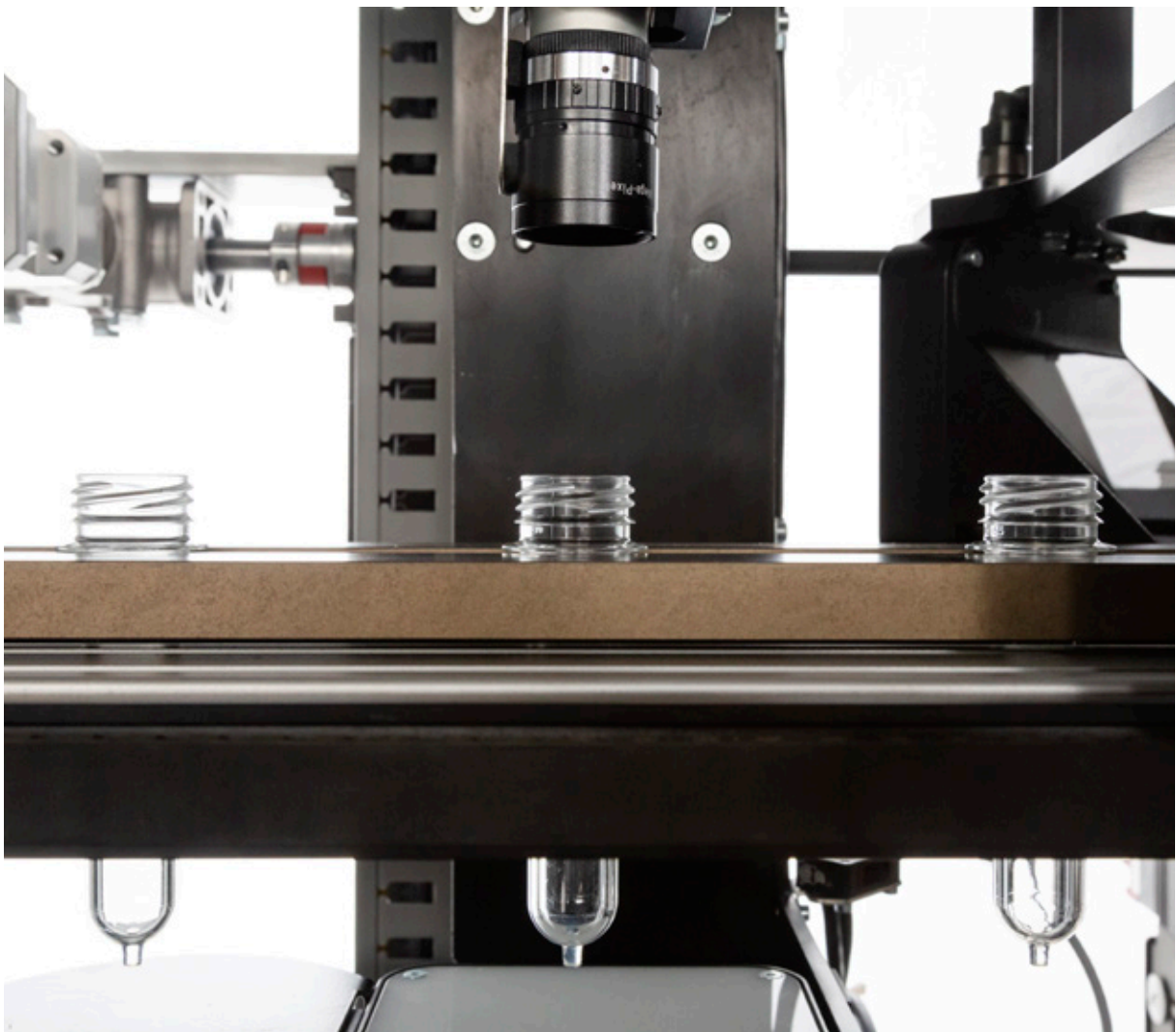
萨克米视像检测系统的特点是CVSWEB模块,可以通过WEB显示产品数据。

大量的信息、统计数据、警报、机器状态及其它更多信息可以远程获得,信息可以显示在任何被授权连接到您公司网络的计算机或者移动设备上。

SACMI offers a wide range of quality control machines to meet all the needs of PET preform manufacturers. In order to meet specific inspection requirements, the range offers several models. The PVS-2 is a sampling machine designed to assist quality control workers, while the compact PVS-5 has been designed for easy on-line installation with a new or existing injection press (made by any manufacturer). At the top of the range is the innovative PVS-10L equipped with D.R.I.V.A. (Drive and Recognize through Intelligent Vision Algorithms), the first machine on the market with fully automated format changeover, designed for off-line installation to quickly reprocess batches of preforms.

萨克米提供广泛的质量控制设备,以满足所有的PET瓶坯制造商的需求。为满足特定的检测要求提供不同机型。PVS-2是一种采样机,旨在帮助操作人员进行质量控制,而设计紧凑的PVS-5易于与全新或者现有注塑设备(任何品牌制造商均适用)连线安装。此外,还包括配备D.R.I.V.A.(通过智能视觉算法驱动和识别)的创新PVS-10L,是市场上第一款具有自动换型功能的检测设备,可以离线安装。

IPS INJECTION PREFORM SYSTEM



IPS 300

PRODUCTIVE

High performance. Up to 128 cavities for 26/22 mm necks, making this a unique solution within today's range of available technologies.

高产

高产高效，性能卓越。128腔瓶坯注塑成型设备适用于生产26/22毫米瓶口的瓶坯，为全球饮料包装行业提供独一无二的个性化解决方案。

FLEXIBLE

The IPS300 can operate with 24-cavity molds for 48 mm necks, up to 96 cavities for 30 mm necks (and up to 128 cavities for 26/22 mm necks with the MHT 'Nano-Pitch' solution).

灵活

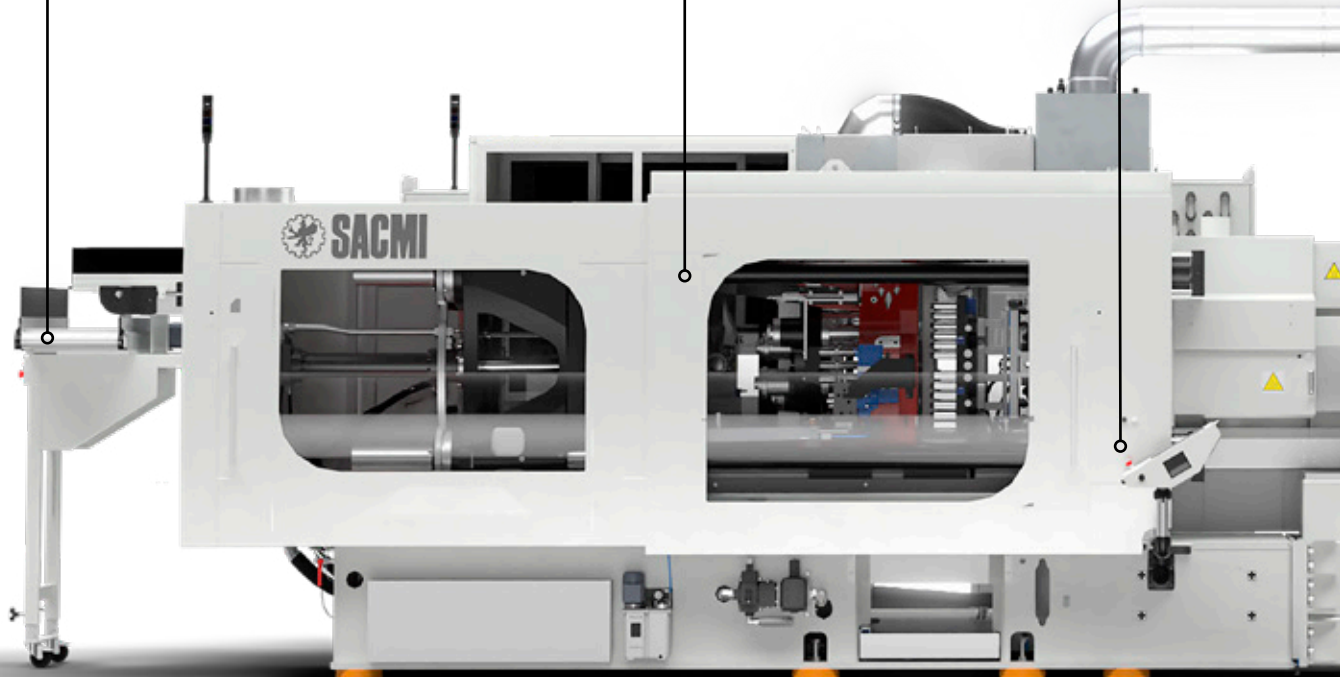
萨克米瓶坯注塑成型设备IPS300的24腔模具用于生产48毫米瓶口的瓶坯，96腔模具用于生产30毫米瓶口的瓶坯（配合MHT“Nano-Pitch”解决方案，128腔模具用于生产26/22毫米瓶口的瓶坯）。

EASY TO USE

A user-friendly HMI simplifies work during start-up and changeover tasks. Remote auxiliary control. SACMI PVS can be integrated to achieve comprehensive process control.

易用

用户友好的人机界面简化开机和换型间的人工操作，以及远程辅助控制。可以与萨克米视像检测设备PVS联机，从而实现全方位产品质量控制。



IPS INJECTION PREFORM SYSTEM



FAST

Extremely fast lock-to-lock (just 2 seconds) and cycle times. The innovative after-cooler with COOL+ (inside cooling system) improves thermal efficiency, shortening cycle times even further.

高速

极速锁模 (仅为2秒) 和循环时间。Cool+模具创新设计具有双冷却功能, 从而提高冷却效率, 更进一步的缩短循环时间。

Technical features 技术参数

PREFORM MOULD MATRIX

瓶坯模具参数表

| 设备 | 模腔数 | 模腔节距 垂直x水平 | 后冷却工位 | 最大瓶口 | 最大长度 (mm) | 重量 (g) |
|-----------------|--------|--|---------------------------|------------|-----------------------|---------------|
| MACHINE | CAVITY | CAVITY PITCH VERTICAL X HORIZONTAL | POST COOLING POSITIONS | MAX NECK | MAX LENGTH (mm) | WEIGHT (g) |
| IPS220 | 72 | 50 x 120 | 3 | 30/25 | 140 | 45 |
| | 48 | 50 x 140 | 3 | 30/25 | 160 | 60 |
| | 48 | 60 x 152 | 3 | Bericap 38 | 160 | 60 |
| | 32 | 60 x 152 | 3 | Bericap 38 | 160 | 60 |
| | 24 | 75 x 190 | 3 | PCF 43 | 195 | 100 |
| | 16 | 80 x 180 | 3 | Bericap 38 | 195 | 140 |
| IPS300 COOL+ | 128 | 45 x 111 | 3 | TBD | TBD | TBD |
| | 96 | 50 x 120 | 3 | 30/25 | 140 | 45 |
| | 72 | 50 x 140 | 3 | 30/25 | 160 | 60 |
| | 72 | 50 x 140 | 4 | PCO 28 | 160 | 60 |
| | 72 | 50 x 155 | 4 | 30/25 | 160 | 60 |
| | 72 | 60 x 140 | 3 | 38 BERICAP | 160 | 60 |
| | 48 | TBD | 3 | PCF 43 | 195 | 90 |
| | 32 | TBD | 3 | 48 mm | 195 | 135 |
| IPS400 | 144 | 45 x 111 | 3 | TBD | TBD | TBD |
| | 128 | 50 x 120 | 3 | 30/25 | 140 | 45 |
| | | | 4 | 30/25 | 140 | 45 |
| | 128 | 50 x 111 | 4 | 30/25 | 160 | 45 |
| | 96 | 50 x 140 | 3 | 30/25 | 160 | 60 |
| | | | 4 | PCO 28 | 140 | 60 |
| | 96 | 50 x 155 | 3 | 30/25 | 160 | 60 |
| | 96 | 60 x 140 | 4 | Bericap 38 | 160 | 60 |
| | 48 | TBD | 4 | PCF43 | 195 | 140 |
| 32 | TBD | 3 | Bericap 48 | 195 | 140 | |

DIMENSIONS

尺寸

| 尺寸 | IPS220 | IPS300 COOL+ | IPS400 |
|------------|--------|--------------|--------|
| DIMENSIONS | IPS220 | IPS300 COOL+ | IPS400 |

| GENERAL / 概述 | | | |
|---|-----------|-------|-----------|
| Overall length (mm) / 总长(mm) | 9850 | 11150 | 11950 |
| Overall width (mm) / 总宽(mm) | 3590 | 4400 | 4770 |
| Floor space (m ²) / 建筑面积(m ²) | 35.4 | 49.1 | 57 |
| Mould weight (kg) / 模具重量(kg) | 2550-3350 | 5500 | 5600-6300 |
| Total weight (kg) / 总重(kg) | 31830 | 46700 | 55800 |
| Oil tank capacity (l) / 油箱容量(l) | 1000 | 1350 | 1650 |

| CLAMPING UNIT / 合模单元 | | | |
|---|-----------|------------|------------|
| Clamp force (kN) / 合模力 | 2200 | 3000 | 4000 |
| Tiebar spacing HxV (mm) / 连接杆间距HxV(mm) | 720 x 718 | 1090 x 810 | 1125 x 932 |
| Max mould height regulation (mm) / 最大模具高度调节(mm) | 740 | 800 | 800 |
| Min mould height regulation (mm) / 最小模具高度调节(mm) | 508 | 565 | 590 |
| Max ejector stroke (mm) / 脱模板行程(mm) | 190 | 190 | 190 |
| Lock-to-lock (s) / 锁模时间(s) | 2.1 | 2 | 2.1 |

| INJECTION UNIT / 注塑单元 | | | | | | | |
|---|------|------|------|------|------|------|------|
| Screw diameter (mm) / 螺杆直径(mm) | 100 | 100 | 120 | 140 | 120 | 140 | |
| Screw L/D ratio / 螺杆长径比 | 25 | 25 | 25 | 25 | 25 | 25 | |
| Nominal screw productivity (kg/h) / 标称螺杆生产率(kg/h) | 625 | 625 | 900 | 1225 | 900 | 1225 | |
| Shooting pot diameter (mm) / 注射腔直径(mm) | 95 | 95 | 105 | 120 | 105 | 120 | |
| Max shot weight (g) / 最大注射重量(g) | 2880 | 3240 | 2880 | 4320 | 5760 | 4320 | 5760 |

| POST COOLING & UNLOADING / 后冷却&卸载 | | | |
|---|---|--------|--------|
| Take out plate post cooling stations / 取坯板后冷却工位 | 3 | 3 or 4 | 3 or 4 |

Your machine data

SMART CARE runs continuous, in-depth, medium-long term health checks on machines. The data generated by individual machines (belonging to multiple lines or plants) is analyzed via AI algorithms on the IoT cloud platform. This monitoring allows the system to forecast machine behavior and predict process parameter trends.

SMART CARE allows users to set various profiles, from plant manager to maintenance manager, allowing for the development of KPIs intended for specific members of personnel. All this has one overriding purpose: to help you

设备数据

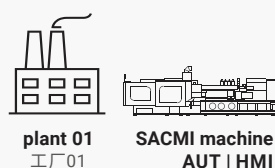
全新智能监督(SMART CARE)系统可以实时管理和控制设备, 确保生产持续稳定进行。

通过物联网云端连接后进行人工智能演算, 对单台设备或多条生产线的数据进行分析, 监督和控制, 根据加工过程中的数据对设备性能和设备生产进行预判。

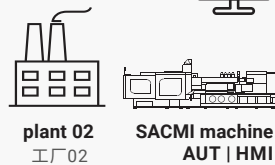
智能监督(SMART CARE)系统允许从工厂经理到设备维护保养经理对设备进行各项设定, 从而为特定工作人员制定其主要业绩指标。

智能监督系统旨在为用户提供更卓越更高效的解决方案。

CUSTOMER MANUFACTURING PLANTS 客户工厂



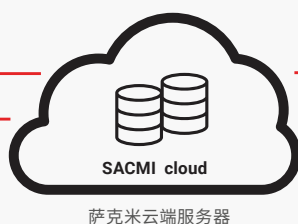
SACMI machine
AUT | HMI
萨克米设备
自动化 | 人机界面



SACMI machine
AUT | HMI
萨克米设备
自动化 | 人机界面



SACMI MONITORING ROOM 萨克米远程监督管理中心

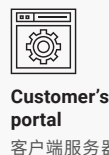


Adding proactive services:

- Maintenance engineering
- Customer service
- Mechanical engineering R&D

远程服务:

- 维护工程
- 客户服务
- 机械工程研发



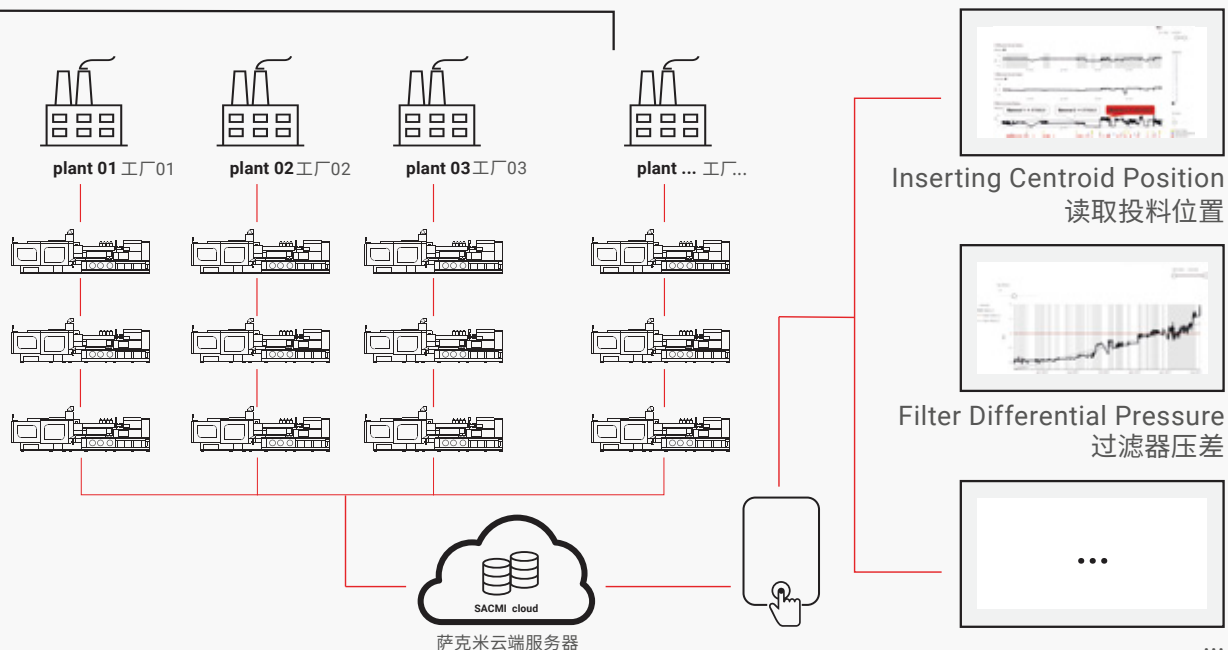
make the best decisions.

Throughout the day, wherever you are, whatever device you're using, SMART CARE allows you, through uniquely precise analysis, to check up on:

- the process
- predictions (with notifications) for maintenance tasks, drastically reducing the risk of unexpected downtimes
- energy consumption
- machine availability
- downtimes
- relative causes
- KPIs (key performance indicators)
- MTBF (mean time between failure)
- MTTR (mean time to repair)

无论何时何地，无论是哪一台设备，智能监督 (SMART CARE)系统可以精确监控和分析以下数据：

- 设备生产
- 可预见性维护保养并减少设备可能发生的停机风险
- 设备能耗数据
- 设备产能
- 设备停机
- 相关原因
- 主要业绩指标(KPIs)
- 平均无故障时间
- 平均维修时间



Training, Service & Spare Parts

培训、服务和备件



Phased Training: we have created specific training programs for 3 different periods of a system's life.

- Online training courses before installation, to become familiar with the machines and processes.
- On-site operational coaching by one of our trainers, to develop operational skills in the field.
- Troubleshooting courses delivered a few months after installation, to help your technicians solve the problems they may experience daily.

E-Learning: our e-learning service will allow you to become familiar with every detail of your system. This includes troubleshooting procedures, maintenance operations, machine and process details. Through up-to-date videos that are highly intuitive and easily viewed by machine personnel, you'll be able to find unique, independent solutions for any problem, ensuring maximized production efficiency.

分阶段培训: 我们为不同阶段创建了特定的培训内容:

- 安装前在线培训课程, 熟悉机器和生产工艺。
- 由我们的一名培训师进行现场操作指导, 以提高现场操作技能。
- 安装后几个月提供故障排除课程, 以帮助您的技术人员解决他们每天可能遇到的问题。

在线学习: 我们的在线学习服务将帮助您熟悉系统的每个细节, 包括故障排除程序、维护操作、机器和工艺细节, 通过高度直观和易于观看的视频, 您将能够为您遇到的问题找到解决方案, 确保最大限度的提高生产效率。

**Endless innovation
since 1919**

百年创新始于1919



The SACMI network provides after-sales service through both its production plants in Imola and its worldwide service centers. Our technical assistance services also include diagnostics, provided all over the world via the Teleservice monitoring service that is offered as an option on purchased machinery.

萨克米通过伊莫拉(Imola)工厂和全球范围内的服务网点为您提供售后服务。我们的技术服务还包括在世界范围内提供远程监控诊断服务(在设备购买时作为备选件)。

