



该离心干燥机的生产能力为每小时12~18吨干品  
The centrifuges are capable of producing of 12 to 18 tons per hour of dry product

## 利用倾注洗涤器经济有效的生产PVC

# Decanters for cost-effective PVC production

**Demand for suspension PVC is soaring. An advanced approach to dewatering is needed to fulfil this need**

悬浮PVC的需求量与日俱增。需要先进的脱水途径来满足要求

人们普遍认为英国离心机专家Thomas Broadbent已经成为悬浮聚氯乙烯(PVC)用倾注洗涤器的设计和制造的世界领先者。

近来,该公司已经向中国、匈牙利、比利时、意大利、德国与西班牙的生产商提供了大量的设备,除了满足聚氯乙烯生产外,还有助于节约成本,如增加产量,减少维护工作量和减少停车时间等。许多领先的聚氯乙烯生产商已经受益于长周期连续运行,包

UK-based centrifuge specialist, Thomas Broadbent, has become widely acknowledged as a world leader in the design and manufacture of decanters for the dewatering of suspension polyvinyl chloride (PVC).

In recent times, the company has supplied a large number of these machines to producers in China, Hungary, Belgium, Italy, Germany and Spain which, in addition to being highly compatible with the PVC production process, have also contributed to cost-saving benefits such as increased production, low maintenance and minimal downtime. Many of the leading PVC producers, including Cangzhou Chemicals, Borsodchem, EVC, Ocean Plastics, Solvay, Atofina, Thai Plastics and Westlake, have experienced such benefits during lengthy periods of continuous operation.

## 独特的防颤装置保护了主要部件，如减速箱与轴承等不受放料过程中聚氯乙烯粘在离心机碗上产生的颤动扭矩峰值的影响

括沧州化工(Gangzhou Chemicals)、Borsodchem、EVC、海洋塑料(Ocean Plastics)、苏威(Solvay)、阿托菲纳(Atofina)、泰国塑料(Thai Plastics)和西湖(Westlake)。

“世界范围内对悬浮聚氯乙烯(PVC)的需求不断增加，很大程度上刺激了我们的最大倾注洗涤器的销售”，Broadbent公司商务总监John Wright如是说。“但市场竞争很激烈，我们通过系统地获得许多世界领先制造商的必要许可证书来持续巩固我们作为聚氯乙烯产业合格供应商的地位。我们也清楚地意识到，产业内单一生产线的规模在不断扩大，再也无法忍受停车时间。”

“为了克服这种情况，我们的设备设计提供了高停留时间、最终产品聚氯乙烯(PVC)低含水量、高产量、低维护工作量、卓越的产品回收率与总体可靠性之间的完美搭配。Broadbent倾注洗涤器并不只是满足大多数操作人员要求的必要生产标准”。

### 高停留时间

取决于产品要求，用于悬浮聚氯乙烯脱水的100mm直径x1500mm的Broadbent固体碗型倾注洗涤器离心干燥机产量可达每小时12~18吨干品。这些设备的高产量提供了相对高的停留时间，降低含水量不需要非常高的转速。从实际经验来看，发现它能够通过延长主要部件的使用寿命并减少常规维护时间来大幅度降低成本。

对于连续聚氯乙烯(PVC)生产，Broadbent也提供具有可变“碗至运输机”差速的倾注洗涤器——此特性通过使用变频器与反驱电机来提供。

### 防颤装置

在Broadbent离心干燥机的中心，设计有一独特的防颤装置直接与倾注洗涤器的内部运输机系统相连。它保护了主要部件，如减速箱与轴承等不受放料过程中聚氯乙烯粘在离心机碗上而产生的颤动扭矩峰值的影响。通过使用Broadbent设计的箱内坚固行星减速器增大了操作弹性，这有助于加大实际操作扭矩与减速箱连续扭矩等级间的安全裕度。

近期合同包括在摩洛哥、印度、波兰及俄罗斯的聚氯乙烯装置。

本文由Thomas Broadbent & Sons Ltd提供

“Increasing worldwide demand for suspension PVC has stimulated a considerable number of orders for some of our largest decanters” says Broadbent’s Business Director John Wright. “But the market is highly competitive and we are continually strengthening our position as an accredited supplier to the PVC industry by systematically acquiring the necessary licence approval certificates from many of the world’s leading producers. We are very much aware that individual production lines are constantly increasing in size in an industry that can no longer afford to tolerate downtime.

“To address these conditions, our machines are designed to provide a good combination of high residence times, low moisture content in the final PVC, high throughput, low maintenance, outstandingly high levels of product recovery and total reliability. Broadbent decanters are more than capable of satisfying all the necessary production criteria which most operators demand.”

### High residence time

Broadbent 100mm diameter x 1500mm solid bowl decanter centrifuges supplied for dewatering suspension PVC are capable of producing throughputs in the region of 12 to 18 tons per hour of dry product, depending on production requirements. The high volume capacity of these machines provides relatively high residence times which allow low cake moisture to be achieved without the need for very high rotational speeds. From practical experience, this has been found to provide appreciable cost benefits by extending the life of major components and minimising downtime on routine maintenance.

For continuous PVC production, Broadbent also offers decanters which are capable of providing variable differential ‘bowl to conveyor’ speeds – optional features provided by the use of frequency inverters and back-drive motors.

### Anti-chatter device

At the heart of the Broadbent centrifuge design is a unique anti-chatter device connected directly to the decanter’s internal conveyor system. This protects vital components such as gearboxes and bearings from the effects of chatter-induced torque peaks, which occur when the PVC adheres to the centrifugal bowl during discharge. Additional operational resilience is provided by the use of a robust planetary gearbox manufactured in-house to a Broadbent design. This helps to maximise the safety margin between the actual operating torque and the gearbox’s continuous torque rating.

Recent contracts include PVC plants in Morocco, India, Poland and Russia. ■

This article was contributed by Thomas Broadbent & Sons Ltd