

virto
CUCCOLINI

**HIGH QUALITY SCREENING
FOR POWDERS**

virto
ScreenX CUCCOLINI



WHAT ARE THE CUCCOLINI VIBRATING SIEVES?

With more than 50,000 sieves and tumblers produced across 70 years for over 65 different industries exported to 75 countries, Virto Group's Cuccolini line of screeners is one of the most popular industrial separator brands in the world. The Cuccolini equipment is able to screen powders and also strain liquids for particle sizes ranging between 0.80" to 25 µm across industries including food, pharma, chemical, recycling, aggregates, fertilizers, and many more. Due to this versatility and Virto Group's "solution sale" approach our screening equipment has been constantly innovated to meet the specific needs of customers across multiple industries.

WHAT ARE THE CUCCOLINI PRODUCT LINES?

The Cuccolini machines can be used for classification, scalping, safety screening, de-dusting, de-watering, de-sliming and solid/liquid separation. Virto Group splits the Cuccolini products in to two categories:

1. Cuccolini Circular Screeners For Powders:

- ▶ **Cuccolini Vibrating Sieves** (diameter ranging from 17.5" to 78.5" with up to three decks): There are five specialized lines of sieves for powders designed and built with one or more of the following features: high capacity, safety screening, low headroom, mobility, high polish finish for pharma, food, ATEX and FDA requirements. The sieve types are the VPB, VPM, VP2, VPF and VPF 2.
- ▶ **Cuccolini Tumbler:** This has a diameter ranging from 35.5" to 98.5" and is offered with up to six decks, including 5 meshes.

- ### 2. Cuccolini Circular Screeners For Liquids
- (diameter ranging from 31.5" to 78.5"): There are two specialized lines of sieves for liquids built for dewatering solids, straining slurries and general solid/liquid separation. If required these can be offered as FDA compliant. They are the VLB and the VLM models.

WHY IS CUCCOLINI'S SCREENING EQUIPMENT DIFFERENT?

The Cuccolini line of sieves and separators include circular, multi-deck single frequency vibrating sieves for powders and liquids and a multi-deck tumbler line for powders. These products are differentiated from their competitors by:

- ▶ **Diverse Product Range With 10,000 Case Studies** – Virto's Cuccolini machines screen particle sizes between 0.80" to 25 µm across all major industries.
- ▶ **Product Guarantee** – Money back guarantee that the equipment will deliver what was promised.
- ▶ **24 Month Warranty** – 2 year warranty covering any form of equipment failure, perishable parts excluded.
- ▶ **Flexible Design** – Each of Virto's Cuccolini products can be tailored to a bespoke design that is modified to specifically suit customer requirements.
- ▶ **Built To GMP Standards, FDA and ATEX Compliant.**
- ▶ **Cost Effective, Proven and Reliable.**

ACCESSORIES

Virto Group offers a wide range of product variations and accessories to meet all screening needs:

- ▶ **Mesh cleaning systems**
These include mechanical cleaning using balls for powders, ultrasonic de-blinding systems and wash in place (WIP) systems with nozzles.
- ▶ **Lid covers**
These vary according to the different diameter for the inlet, inspection ports and valves/spigots.
- ▶ **Stainless steel base**
If required, a stainless steel base can be added.
- ▶ **Quick release band clamps**
Available for safe, effective and quick fixing of decks to the machine base.
- ▶ **Mobile trolley**
All equipment can be mounted on wheels or a trolley.
- ▶ **AISI 316 stainless steel manufacturing**
Virto Group specializes in making FDA and ATEX compliant AISI 316 stainless steel screeners for the food and pharmaceutical industries and provides the same machines for many other sectors.

THE VPB SIEVE

The VPB vibrating sieve is part of the Cuccolini screening line. It is used for screening and separating dry powders across many different industries such as food, recycling, coatings and metal powders. The main point of differentiation from other sieves resides in the design characteristics such as the stainless steel base (optional trolley mounted), central mounted motor and quick-release band clamps. Due to its compact size, height adjustability and mobility, the VPB models are highly versatile units that are manufactured in four different sizes. All VPB models can be modified to suit individual application needs and offer 110 lb – 6630 lb per hour capacity across the model range which may vary depending on the powder specification.



SIZES AND CONFIGURATION:

- Standard single deck - The standard single deck configuration is offered with a 17.5" diameter (VPB 450 1Y) or 23.5" diameter (VPB 600 1Y); and,
- Trolley mounted single deck – The 19.5" diameter (VPB 500 1X) and 31.5" diameter (VPB 800 1X) single deck units are mounted on a mobile trolley.

VPB MULTIPLE DECKS (UPTO 3 DECKS):

As well as the single deck configuration the 19.5" (VPB 500 2-3X) and 31.5" (VPB 800 2-3X) diameter units are offered in multiple deck configurations of up to 3 decks and can be mounted on a stainless steel base, a static unit or a trolley.

WHAT ARE THE USES OF THE VPB SIEVE?

Compared to alternative Cuccolini sieves such as the VPM model, the VPB sieve is used for screening powders at lower capacities for laboratory use, batch production, safety screening, separation, de-dusting, topping and tailing and other applications.

WHAT ARE THE BENEFITS OF THE VPB?

- ▶ Central mounted motor, allowing complete control of product movement on the screen.
- ▶ Manufactured in stainless steel.
- ▶ ATEX certified.
- ▶ FDA approved seals and gaskets.
- ▶ 2 year warranty (perishable items not included).
- ▶ Available with single or multiple decks.
- ▶ Versatile and mobile – quick release clamps, adjustable height and optional trolley.

| Technical Characteristics | VPB 450 | VPB 600 | VPB 500 1X | VPB 500 2-3 X | VPB 800 1-2 X | VPB 800 3X |
|--------------------------------------|---------|---------|------------|---------------|---------------|------------|
| Electrical power (Hp) | 0.25 | 0.65 | 0.41 | 0.41 | 0.98 | 0.98 |
| Centrifugal force (lb) | 370 | 940 | 880 | 880 | 1200 | 2200 |
| Number of meshes | 1-3 | 1-3 | 1 | 2-3 | 1 | 2-3 |
| Mesh surface area (ft ²) | 1.12 | 2.85 | 2.36 | 2.36 | 3.87 | 3.87 |

DESIGN CHARACTERISTICS

- ▶ Body and trolley in AISI 304 or 316 stainless steel.
- ▶ High speed motor at 2,800 rpm.
- ▶ Conical sieve deck and stainless steel bolts perfect for splash proofing.

VPB 500 – 800

- ▶ Standard motor at 1,500 rpm.
- ▶ Trolley or fixed base in stainless steel.
- ▶ Multiple sieve decks.
- ▶ Quick-release band clamps.

THE VPM SIEVE

The high capacity VPM vibrating sieve from the Cuccolini line has become the industry standard for the efficient screening and separation of fine powders at high throughputs. With over 20 years of constant development in design and manufacturing, this model offers the sieving industry's most cost effective, user friendly and reliable screening solution for nearly all powder applications. The VPM is available with various accessories to optimize performance including mesh cleaning systems such as ultrasonic or ball cleaning systems (food and non-food grade). The VPM can be offered with ATEX certification and is manufactured in accordance with GMP standards.



SIZES AND CONFIGURATION:

- Diameter sizes - 35.5" (VPM 900), 47" (VPM 1200), 59" (VPM 1500) and 78.5" (VPM 2000);
- Multiple Decks – The VPM is offered in multiple deck configuration of up to 3 decks; and
- High Capacity & Versatile Design - The VPM has a sloped under-pan for high capacity, a lid with spigots to suit all process lines and quick-release clamps.

WHAT ARE THE USES OF VPM?

Designed specifically for high capacity and highly efficient powder separation for all major industries but often used for de-dusting, topping and tailing, grading and control screening.

WHAT ARE THE BENEFITS OF THE VPM?

- ▶ Designed for high capacity and highly efficient separation.
- ▶ Multiple deck separation.
- ▶ Versatile in its application to all process lines and all major industries.
- ▶ Manufactured in stainless steel.
- ▶ ATEX certified.
- ▶ FDA approved seals and gaskets.
- ▶ 2 year warranty (perishable items not included).

| Technical Characteristics | VPM 900 1-2 X | VPM 900 3X | VPM 1200 1-2 X | VPM 1200 3 X | VPM 1500 1-2 X | VPM 1500 3X | VPM 2000 1-2 X | VPM 2000 3X |
|--------------------------------------|------------------|---------------|-------------------|-----------------|-------------------|----------------|-------------------|----------------|
| Electrical power (Hp) | 0.98 | 0.98 | 1.68 | 1.68 | 2.01 | 2.01 | 6.04 | 6.04 |
| Centrifugal force (lb) | 1800 | 2800 | 2800 | 4200 | 4700 | 6400 | 12000 | 14000 |
| Number of meshes | 1 | 2 – 3 | 1 | 2 – 3 | 1 | 2 – 3 | 1 | 2 – 3 |
| Mesh surface area (ft ²) | 6.32 | 6.32 | 10.04 | 10.04 | 16.96 | 16.96 | 29.07 | 29.07 |

DESIGN CHARACTERISTICS

- ▶ Available with single or multiple decks.
- ▶ Quick release band clamps.
- ▶ All contact parts in AISI 304 or 316 stainless steel.
- ▶ Fixed base with an option to mount on wheels.
- ▶ Sloped under-pan to achieve high capacity.
- ▶ Standard motor 1,500 rpm.

THE VP2 SIEVE

The VP2 models are 'low profile' circular screeners for 'safety screening' powders at critical check points. The units feature a central inlet and a central outlet with twin motors, one motor mounted on each side of the machine. The design allows for a large diameter screener to be installed within limited headroom, often in an existing process line. VP2 models are commonly used in conjunction with sack tip units and with big bag filling/discharging stations. Manufactured in various sizes, this model comes in a single deck configuration and is suitable for use with dry powders as well as liquids.



SIZES AND CONFIGURATION:

The VP2 is offered in multiple sizes in a single deck configuration only. They are:

| Size | 17.5" | 19.5" | 31.5" | 35.5" | 47" | 59" |
|-------|------------|------------|------------|------------|-------------|-------------|
| Model | VP2 450 1Y | VP2 500 1X | VP2 800 1X | VP2 900 1X | VP2 1200 1X | VP2 1500 1X |

WHAT ARE THE USES OF THE VP2 SIEVE?

The VP2 models are used as safety screens for guaranteeing maximum product control. Typical environments where they are employed include storage silo outlets, powder conveyor lines and at pre-packing phases within many different industries including food, agriculture, chemical, recycling and many others.

WHAT ARE THE BENEFITS OF VP2?

- ▶ Specifically designed for highly efficient safety/control screening.
- ▶ High capacity due to straight through design.
- ▶ Suitable for low headroom.
- ▶ Easy to maintain.
- ▶ Manufactured in stainless steel contact parts.
- ▶ ATEX certified.
- ▶ FDA approved seals and gaskets.
- ▶ 2 year warranty (perishable items not included).

| Technical Characteristics | VP2 450 | VP2 500 | VP2 800 | VP2 900 | VP2 1200 | VP2 1500 |
|--------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Electrical power (Hp) | 0.25+0.25 | 0.23+0.23 | 0.41+0.41 | 0.67+0.67 | 0.67+0.67 | 1.21+1.21 |
| Centrifugal force (lb) | 870 | 930 | 1800 | 2900 | 3300 | 6200 |
| Number of meshes | 1 – 2 | 1 – 2 | 1 - 2 | 1 - 2 | 1 - 2 | 1 - 2 |
| Mesh surface area (ft ²) | 1.12 | 1.4 | 3.87 | 6.32 | 10.04 | 16.96 |

DESIGN CHARACTERISTICS

- ▶ Central outlet discharge.
- ▶ Two vibrating motors.
- ▶ Control box rated to IP 65.
- ▶ ATEX certified.
- ▶ Parts in contact with product are in AISI 304 or 316 stainless steel.

THE VTU - TUMBLER SIEVE

The Cuccolini VTU line is a line of Tumblers which is a separator used for classifying and de-dusting fine, dry, non-sticky materials at a high capacity and high efficiency. It achieves up to 99% efficiency for a particle size range between 0.80" and 25 µm for materials in the food, pharmaceutical, metal powders and aggregate industries. Cuccolini's VTU separators are an alternative to vibrating sieve technology for fragile materials that require gentler screening with high throughputs. Tumbler's often have an increased mesh lifetime (500% – 1,000%) compared to standard vibrating sieves due to an operating principle of slower acceleration exerted onto the particles. This slow acceleration enables the material to remain on the mesh longer. This movement increases separation efficiency with the additional benefit of avoiding both the degradation of the product and the creation of additional fine material.



SIZES AND CONFIGURATION:

The VTU is offered in multiple sizes with up to 5 meshes. They are:

- **Diameter sizes** - 35.5" (VTU 900), 47" (VTU 1200), 59" (VTU 1500), 78.5" (VTU 2000) and 94.5" (VTU 2400); and,
- **Multiple Decks** – The VTU is offered in a multiple deck configuration of up to 5 meshes.

WHAT ARE THE BENEFITS OF VTU?

- ▶ Highly efficient classification and de-dusting of fragile materials between 1,000 µm and 30 µm.
- ▶ The number of decks can be easily changed.
- ▶ Straight through design.
- ▶ Easy to clean and maintain.
- ▶ Manufactured in stainless steel contact parts.
- ▶ ATEX certified.
- ▶ FDA approved seals and gaskets.
- ▶ 2 year warranty (perishable items not included).

| Technical Characteristics | VTU 900 | VTU 1200 | VTU 1500 | VTU 2000 | VTU 2400 |
|--------------------------------------|---------|----------|----------|----------|----------|
| Electrical power (Hp) | 2.95 | 2.95 | 2.95 | 5.37 | 7.37 |
| Number of meshes | 1-5 | 1-5 | 1-5 | 1-5 | 1-5 |
| Mesh surface area (ft ²) | 6.32 | 10.04 | 16.15 | 27.98 | 48.66 |

DESIGN CHARACTERISTICS

- ▶ Bolt clamping system.
- ▶ Parts in contact with product in AISI 304 or 316 stainless steel.
- ▶ Connectable discharge outlets.
- ▶ Adjustable three-dimensional movement.
- ▶ Belt drive.



Virto Group: Cuccolini S.r.l.

Via Raffaello Sanzio, 2
42124 - Reggio Emilia
(Italy)

Tel. +39 0522 238632
www.virtogroup.com