

Ribbon screw mixer

The Vitomix ribbon screw mixer is a multi-functional mixer that combines gentle and mid shear mixing in one machine. Compared to conventional conical mixers, the Vitomix has a compact design and a wide operating range. With up to eight times more transport volume, it is a very energy-efficient mixer with low operational costs and short mixing times.

Typical applications

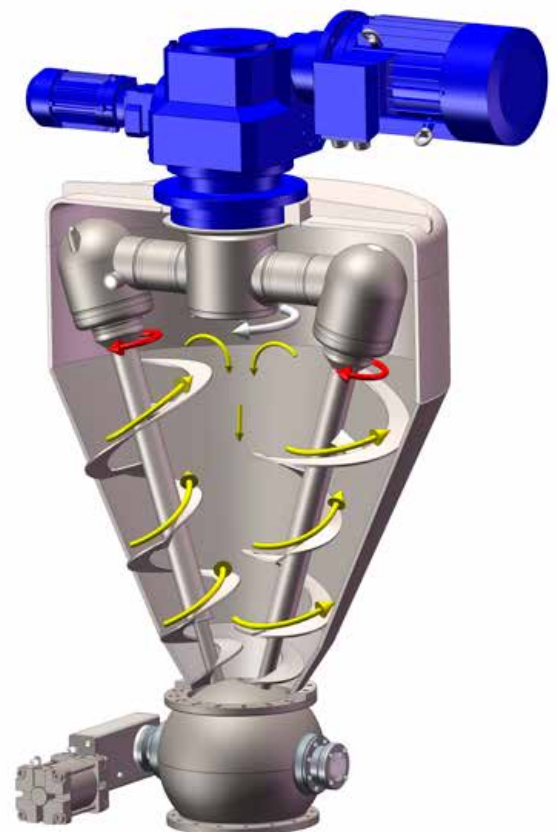
The Vitomix is suitable for a wide variety of process applications, including:

- Fast mixing of powders, pastes and slurries
- Addition of liquids or fats without the use of lump breakers
- Combining gentle mixing with mid shear mixing in one machine
- Granulating
- Flavouring
- Colouring
- Heating / cooling

Working principle

The Vitomix is equipped with two conical ribbon screws mounted on an orbital arm that transports the product from the bottom of the vessel to the surface. The material flows downwards through the centre of the vessel by gravity whilst the high rotational speed of the agitator ensures mid-shear mixing in very short batch times.

The design of the two ribbon screws enables the transportation of large quantities of product to the surface of the batch where it is fluidised with a high degree of product refreshment. This technique makes the Vitomix ideal when you want to add liquids to the powder(s) you are mixing. The Vitomix has a variable tip speed of between 0.4 and 6 m/s.





Key features

Mixing time

The special design of the Vitomix results in a substantial improvement in mixing efficiency and a much more efficient and faster mixing process even at lower speeds. The Vitomix is up to 8 times faster than conventional mixers.

Adding liquids without creating lumps

The design of the two conical screws creates a fluidised bed in the upper part of the mixer cone that is perfect for adding liquids such as fats, coating agents, flavours and fragrances, without creating lumps. This eliminates the need for lump breakers.

Multi-processor

The Vitomix can combine its low and mid shear mixing with multiple unit operations, for example drying, heating, cooling, liquid addition, de-aeration and coating, in one machine.

Full discharge

The combination of a conical vessel, the special design of the mixing screw, and the large bottom outlet guarantees fast and full discharge, without the risk of segregation. Typical yield for free-flowing powders is 99.99%.



Short cycle times

State-of-the-art technology

Fast & gentle Multi-processor

Energy efficient

Full discharge

Models & specifications

The Vitomix is available in several sizes, ranging from 200 up to 10 000 litres. A few sizes with their basic characteristics are described below. Detailed information is available on request.

| Size | [l] | 500 | 1000 | 2000 | 3000 | 5000 | 7000 | 10 000 |
|---------------------|------|-----------|----------|----------|----------|---------|---------|----------|
| Vessel diameter | [mm] | 1230 | 1530 | 1900 | 2160 | 2550 | 2850 | 3200 |
| Vessel height | [mm] | 1260 | 1690 | 1890 | 2430 | 2870 | 2990 | 3350 |
| Height incl. motor | [mm] | 1590 | 2270 | 2480 | 3380 | 3860 | 3990 | 4570 |
| Typical motor power | [kW] | 1.1 - 5.5 | 3 - 18.5 | 5.5 - 30 | 7.5 - 45 | 15 - 75 | 22 - 90 | 30 - 110 |