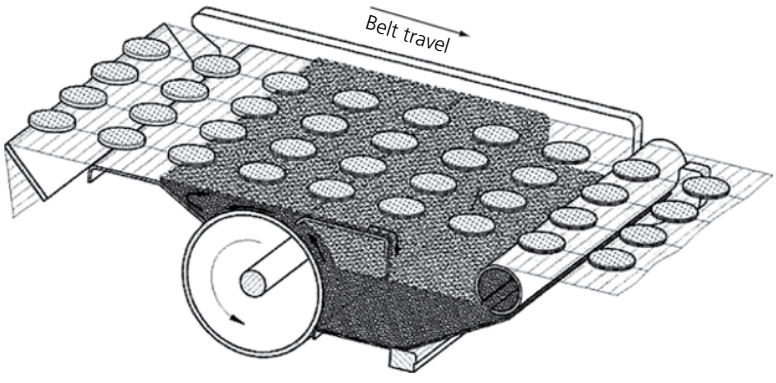

Figure 14.19 Schematic diagram of a chocolate bottomer. Source: Sollich. Reproduced with permission of Sollich Germany.

To form a bottom without the curtain, the chocolate valve lever must be moved to the "bottom coating" position. All of the chocolate supplied by the pawl pump is then directed to the bottoming tank.

A "pre-bottomer" is sometimes used to ensure that the base of the item is correctly coated, this being a standalone unit that as the name implies, adds only a bottom. It is effectively an enrober without a curtain, and is followed by a cooling table allowing 2–3 min to set the base so that it transfers to the wire belt of the enrober. If it is shorter, it will need to run so cold that condensation can be a serious problem. A hold-down device (see Figure 14.20 in Section 14.3.8.9) will be needed to control lightweight items. They are not often included in a line, but can help to put a good base on a difficult product.

14.3.8.3 The blower

Blowing reduces the coating thickness mainly on the upper face of the article; it can also leave a distinctive fine wavy appearance that improves the visual character of the product. The blowing effect is regulated mainly by adjusting the amount of air, though the height of the blower mouth can be adjusted, with a gap of 15–20 mm (0.6–0.8 in) between articles and the blower mouth piece being usual. The blower discharge lip can also be moved. A lip air temperature of 30–33 °C (86–92 °F) with a tilt of about 10° against the belt direction is generally best.

A second blower may be necessary if the remaining chocolate on the product needs to be reduced further, or when the surface is very uneven as in the case of a wafer product.

As the blower air circulates within the cabinet it may become too warm and a slide on the upper part of the coater can be opened to suck in air. For a constant and accurate blower output, the discharge lip must be cleaned once a week and the turbine once a year. Blowers are calibrated during manufacture to give an even flow all the way across the belt; with the calibration record usually being kept by the manufacturer.

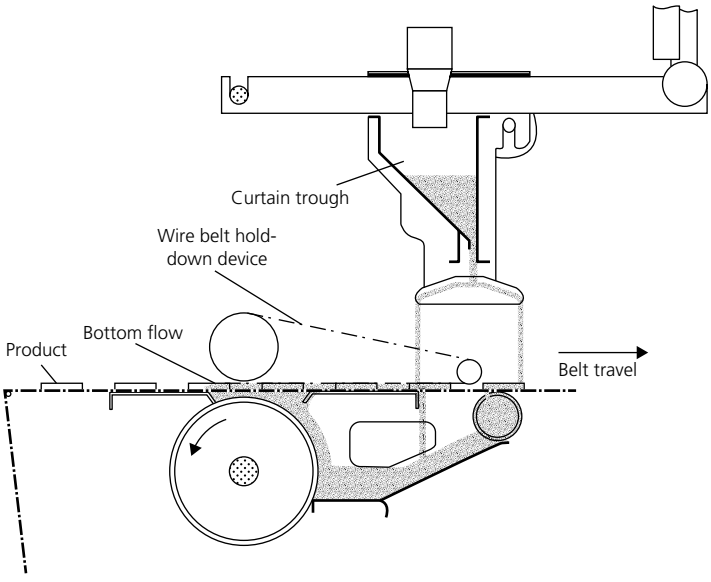

Figure 14.20 Schematic diagram of enrober hold-down device. Source: Sollich. Reproduced with permission of Sollich Germany.

14.3.8.4 The shaker

The shaker also helps to remove excess coating, but it is most effective at slimming down the side coverage. The standard shaking grid consists of three or four crossbars under the wire belt and a mechanical movement of the grid to shake the products travelling on the wire belt. The effect of shaking can be regulated by adjusting the amplitude and frequency of the shaker. The greater the yield value of the coating the more energy it takes to shake it off. Starting to shake while the chocolate is still flowing due to the blower can make the shaker even more effective in overcoming the yield value. Shaking smoothens out the ripples left by the blower which could limit its use if ripples are desired on the product. Sometimes the shaker must be also turned down to avoid having the pieces move sideways on the belt and stick to each other.

14.3.8.5 The wire belt

The rod network wire belt is at the heart of an enrobing system and was perhaps the principal invention that led to the success of the first enrobers. Both its construction and installation require care and accuracy, if it is to have a good service life. The belt tension should be set so that it is carried perfectly in the drive sprockets, with the teeth in true alignment. Any oscillations or unevenness that might cause excessive belt wear should be avoided or at least minimised. The arrangement of the product centres on the belt is important to avoid grid marks on the bottom of the sweet. Ideally they should be aligned away from the links in the enrober grid.